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ABSTRACT

The handbook is intended for elementary and secondary school administrators and teachers providing programs for handicapped students in the province of Alberta, Canada. Functions of administrators include the establishment, development, and/or implementation of goals, support services, and evaluation procedures. The parents' role in assessment, planning and implementing the program, and acquiring knowledge is described. Listed are functions of 16 support personnel such as the audiologist and itinerant teacher; and outlined are such strategies for teachers as effective use of aides, and cooperation with other professionals. Among components of the preschool program explained are early intervention, screening, placement, and evaluation. Types of assessment, their purposes, and special considerations are discussed briefly. The purpose, process, components, and evaluation of the individual program plan are both outlined and diagramed. Behavioral objectives are discussed in relation to types, advantages, and problems; and task analysis is discussed, with examples presented such as using the telephone. Step-by-step instructions are provided for conducting and recording behavioral observations. Also described and outlined are recordkeeping and reporting. Procedures for establishing a work study program are outlined; and checklists, forms, and a list of Alberta Department of Education guidelines are included. (MC)

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FOREWORD

The purpose of this handbook is to assist school administrators and teachers in elementary and secondary schools who have handicapped students in their classes. It is becoming increasingly common for students with special needs to attend school with their non-handicapped peers. Their presence can raise some special concerns for teachers and school administrators. The roles and responsibilities of teachers and parents may need clarification; policies will need to be established concerning placement, program planning, and evaluation; effective working relationships with other professionals will need to be developed. It is hoped that this handbook will help all people involved in the education of students with special needs.

ACKNOWLEDGEMENTS

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Note: Teachers and Administrators are advised to
contact the

Special Educational Services Branch
Alberta Education
Devonian Building
11160 Jasper Avenue
EDMONTON, Alberta
TSK OL2

annually to obtain current information about Alberta
Education grants and guidelines pertaining to special
education.

THE ROLE
OF
ADMINISTRATION

A. INTRODUCTION

Administration in a school system includes both system-level or central office administrators and school-level administrators. Both of these levels have some responsibility for the provision of adequate special educational services. Several functions must be performed regarding any program within a school system. Goals must be established; programs must be developed and implemented for the achievement of those goals; support services must be provided to facilitate the implementation of the programs and evaluation procedures must be established. These four functions are shared by school-level and system-level personnel (Figure 1). It is important to emphasize that the special education program is like any program in the system and involves the same responsibilities for administrators.

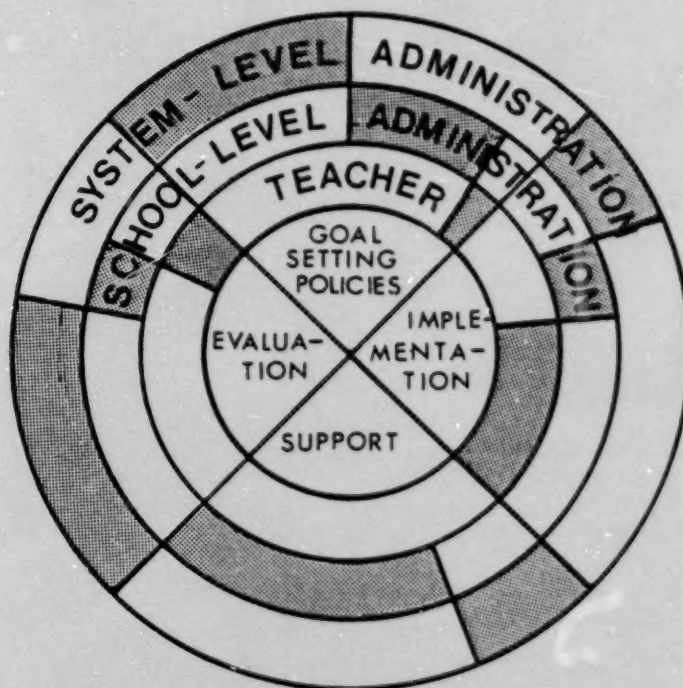


Figure 1: Shared Administrative Functions

System-level personnel charged with special education programming are generally responsible for ensuring the following:

- a. that government guidelines are observed;
- b. that budget requirements are managed;
- c. that assessment and placement procedures are employed efficiently and systematically;
- d. that system inservice training is undertaken and participated in by teachers and administrators;
- e. that special education policies of the local board of education are implemented.

B. KNOWLEDGE OF SPECIAL EDUCATION

When handicapped students are under his charge, the administrator at any level should have specific knowledge and skills to fill his role effectively. He should have a thorough understanding of child development plus knowledge of the effects of specific handicaps on learning and development. In addition, he needs to be knowledgeable about the various regulations and guidelines, provincial and local, pertaining to special education. The administrator should be familiar with the Program of Studies, the special education curriculum guides and have some background in individualized instruction.

It is important for him to know where resource personnel are located and how their services can be obtained. Interest groups concerned with different handicaps need to be identified by the administration and efforts made to ensure liaison and cooperation. Administrators may receive assistance in familiarizing themselves with the different interest groups by contacting the special education consultants in the Regional Offices of Alberta Education.

C. ADMINISTRATIVE FUNCTIONS

Administrative functions are shared by all administrators. A number of different tasks comprise each of the functions. Since delivery systems used in educating the handicapped will differ according to local needs, the various tasks will need to be identified and assigned to particular administrative positions by each system.

1. Planning

Goals, policies, and procedures need to be established at all levels of administration. Planning should also include the development of a role description for each administrative position within the delivery system.

Assessments play an important part in program planning. At the same level, policies should be established concerning the following:

- a. provision of assessment services;
- b. obtaining parental consent for assessments;
- c. confidentiality of reports and records;
- d. referral procedures for more extensive assessment and/or treatment outside of the school system, where necessary.

At the school level, a clear policy should be established concerning referral procedures. Referrals should come through the principal, who will have the task of setting priorities, expediting referrals, following up on them to ensure that they are carried out, and seeing that recommendations coming out of the assessment are understood by the teacher. The principal is responsible for implementing the system's policies concerning referrals.

2. Implementation

The implementation of a special education program is the responsibility of the teacher. However, administrators play a significant role in the implementation. It includes the following:

- a. monitoring and assisting the classroom management;
- b. interpreting the Program of Studies and curriculum guides;
- c. ensuring that government guidelines and regulations are observed;
- d. ensuring that programs for individual students are periodically reviewed, in accordance with Alberta Education guidelines.

Placement of students in special education programs is an important part of implementation. At the system level, policies and procedures should be established concerning placement, obtaining parental consent, and carrying out reviews of programs and placements. At the school level, the principal is responsible for implementing the system's policies and seeing that approved procedures are followed.

3. Support Services

One important way in which the administrator provides support for the teaching staff is through the development of healthy professional staff relations. These begin with the selection of a staff that accepts and understands handicapped students. All staff members should hold a positive attitude toward students, including the handicapped. The administrator has the responsibility of assisting each staff member to become an integral part of the total system. He needs to recognize and accommodate for the increased stress under which teachers of special classes often operate. He should know the strengths of the staff, the degree and types of support each required, and strive to maintain the morale of the staff.

Communication with the students, parents, guardians, teachers, public, and interested groups is important. This aspect of the administrator's role will, at one time or another, require all the diplomacy, clear thinking, and knowledge of special education that he can muster. In his communication role, he wears many hats. He must be a sounding board for all, a disciplinarian at times, a mediator on other occasions, an advocate for the student, a disseminator of information, and if fortunate, a recipient of a few bouquets.

In directing the special education program, the administration must provide instructional leadership, i.e. be knowledgeable about new programs, materials and teaching strategies and make this information available to the teachers. Teachers need support from all levels of administration in developing programs for students with special needs, from on-the-job support from the principal to

financial support for professional development activities from the superintendent or the board. The administration should be able to recommend and expedite access to appropriate resource personnel to assist the teacher.

Students with special needs are often involved with other agencies which have a role to play in their growth and development. All levels of administration need to work cooperatively with these agencies for assessment and placement and other support services. Agencies such as Alberta Social Services and Community Health (Child Protection, Services for the Handicapped), Public Health Units, Alberta Children's Hospital, Glenrose Hospital, and the medical profession provide services to children all over the province. Administrators also need to work cooperatively with other agencies or organizations unique to their area, and should be familiar with local and provincial directories which list agencies concerned with handicapped children.

4. Evaluation

Administration has several different roles in evaluation in special education, depending upon the needs of the system, the size of the system, and the resources of the system.

The director of special education, or other administrators responsible for the system's special education program, should develop evaluation procedures which include both external and self-evaluation components. Periodically, requests for external evaluation should be made to Alberta Education, as is the practice for regular programs. Self-evaluation procedures, which involve system-level administration and school-level administration and personnel, should be instituted annually by the director of special education. In the absence of an administrator charged with responsibilities for special education, the responsibility for this aspect of evaluation will rest with the principal or superintendent. Such system level organizational procedures should ensure that Alberta Education guidelines are being met, but more importantly will ensure that the program needs of individual students are being met.

System-level and school-level administration need to participate as members of the team which makes placement decisions based on educational planning for each student. Both levels of administration also need to be involved in reviewing each student's program.

D. CONCLUSION

The administrator at any level has a major role to play in the delivery of service. Among the many students for whom the administrator is responsible, there will be students with special needs. These students are entitled to receive individual programs suited to their needs. Moreover, they are entitled to receive the acceptance and understanding that all who work with children can give. The administrator is the "key" in fostering this attitude among the staff.

THE ROLE
OF
PARENTS

A. INTRODUCTION

Within the past decade the relationship between home and school has undergone a major transformation. Many professionals are now beginning to view parent involvement as a potential solution to pressing educational problems. When parents and educators possess a mutual appreciation for the role each has to play in the education of the child, opportunities for development are increased. Research indicates that when parents are involved in the process of education, their children are likely to achieve better.

Parents of a handicapped child face additional demands and problems. In order to meet the special needs of their child, it is even more important that they be involved in the education decision-making process at all levels. The following guidelines may be of assistance in deciding when and how this may be undertaken.

B. PARENT INVOLVEMENT

1. In Assessment

- a. With known handicap: When a child is enrolled in a new school system, it is essential that parents inform the school of any medical or emotional problems which could interfere with his success in school. The school should also be informed of any previous assessments, completed by other school systems or agencies, to prevent unnecessary duplication.
- b. With unknown handicap: Once a child has been admitted to the school system and a handicapping condition is suspected, it is the responsibility of the school to inform the parents of the concern and refer the child for appropriate assessment. Parents may give or refuse permission to have their child assessed. If they consent, parents are then entitled to receive an interpretation of the assessment results. In the event of refusal, the school must inform the parents of the possible consequences. After parents have been informed of the special educational needs of the child, they should be given a description of the services available to meet those needs. The description should be comprehensive and include services available within the home, school, the community, the school system and outside where appropriate.

It is the responsibility of the school to recommend the most appropriate program to meet the child's needs. It then becomes the responsibility of the parents to accept or reject all or part of the school's recommendations. If the parents refuse all or part of the recommendations, it is the responsibility of the school to advise parents of the implications of such decisions and point out possible alternatives.

If the recommendations for placement are accepted, the school should arrange for an orientation of the parents and child. Time lines for program implementation should be set and the key personnel who will be working on the program identified.

2. In Planning

Following the placement of the child in the program, parents should be included in the development of the individual student program. Parents can provide valuable information and data on the child's past successes and failures, as well as his strengths and weaknesses. Consideration must be given to objectives which parents view as priorities.

The major responsibility for program design rests with the teacher and other members of the professional team with provision made for parental input. Once the goals and objectives of the program have been identified, the program priorities for that year should be discussed with the parents.

Parent involvement in planning will vary depending on the degree and severity of the handicapping condition and specificity of the service required by the child, and the desire of the parents to be involved. If parents do not wish to be involved in program planning, it is still the responsibility of the school to describe the program to the parent.

3. In Implementation

Once the program has been implemented, parents can then determine how they can best support it. Some parents may wish to be more actively involved than others. Some may volunteer to work directly in the classroom under the direction of the teacher. This not only provides assistance to the teacher, but also provides an opportunity for the parent to acquire additional specialized skills. It presents opportunities for consistent handling of behavior and consistency in educational techniques.

Other parents may wish to assist by providing transportation and supervision for special programs or by preparing materials such as tape recordings, games, etc.

4. In Monitoring

In the ongoing evaluation of the program, it is important that communication between home and school be frequent. In an effort to encourage open communication between parents and school, the following must be considered:

- a. for parents and teachers: Choose a time and location convenient for both. Be willing to share all necessary data and information. Take a positive and constructive attitude in the discussion.
- b. for teachers: In any meeting between parents and teachers, do not use jargon. Try not to have too many professionals at the meeting since parents may feel overwhelmed.
- c. for parents: It is important that whenever possible, both parents be present at the interview. It would be helpful if parents requested beforehand that certain information be available at the meeting. The child's progress at home should be monitored and the information shared with the school.

Parent-Teacher conferences should be held on a regular basis. Written reports should be provided along with a statement of objectives. Whatever method or combination of methods is used, the responsibility for communication is a joint responsibility of both home and school.

5. In Extending the Program

Because the child spends only part of his day in school and because the home situation has a strong influence on the child's attitudes and behaviors, parents should be encouraged to support school programs in the home. This support could include several aspects of the program such as self-help, behavior management, or others as deemed appropriate.

Before efforts are made to extend the school program into the home, consideration must be given to the needs of the family and child. If the parents feel uncomfortable or feel they do not have adequate skills to help the child in his formal program, they should still be encouraged to keep informed. In addition, they should be shown ways in which they can support the school programs and the child through using encouragement and positive reinforcement.

6. In Parent Education

Parent education should extend beyond merely giving the parent sufficient information to understand the child's program and getting approval and consent. It should extend their knowledge of the nature of the handicapping condition, the content of the child's programs and techniques for action. It should assist the parent to make informed decisions regarding his child.

Parent education must also be considered as both group and individual. It is individual because each parent must acquire specific information that pertains to his child. It is group because parents share common needs and concerns when raising a child with special needs. The school should take the leadership in providing education programs to meet this variety of needs, both group and individual. Programs sponsored jointly by school and parent groups may assist in establishing important linkages necessary to further growth and constructive communication.

WORKING WITH
SUPPORT STAFF

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A. INTRODUCTION

There is a growing awareness among professionals who deal with the handicapped student, of the complexity of his needs. There is need for understanding of the emotional, psychological, physical and social needs of the student along with the intellectual and academic requirements. This does not mean that the teacher should become an expert in all of these fields. It does mean that he should be able to recognize when it is necessary to obtain additional assistance in the provision of a total program. At that time the teacher should call upon the expertise of various types of support personnel.

B. SUPPORT PERSONNEL

There are a number of personnel who provide supportive services to special educational programs. The qualifications of this group may range from experience in working with children to having many years of university training.

Support staff may be employed by the school board or may be drawn from community agencies. Frequently, a medical referral must be obtained before a student can be seen by professionals such as a physio- or occupational therapist. Individually or working as a team, support staff provide information for diagnosis, screening and placement of students.

The major functions of the various support personnel are as follows:

1. Audiologist

- specializes in diagnostic evaluation, habilitative services, and research related to hearing;
- determines auditory efficiency by evaluating range, nature and degree of hearing function, using electroacoustic instrumentation, such as puretone and speech audiometers, and galvanic skin response or electroencephalographic-testing equipment;
- coordinates audiometric results with other diagnostic data, such as educational, medical, social, and behavioral information;
- differentiates between organic and non-organic hearing disabilities through the evaluation of total response pattern and use of acoustic tests, such as delayed auditory feedback;
- plans, directs, conducts, or participates in habilitative programs including counselling, auditory training, speech reading, and speech conservation;
- acts as consultant to educational, medical, and other professional groups.

2. Itinerant Teacher

- assists handicapped students who are able to attend regular school programs by providing tutoring and obtaining materials and equipment which help to reduce the impact of the handicap;
- provides consultation to school personnel and parents regarding the student's handicapping condition and its educational implications.

3. Occupational Therapist

- focuses on upper extremity posturing and manipulative skills as a prelude to enhancement of independent functioning in self-help, play and all areas of daily living;
- utilizes methods which inhibit primitive reflexes and facilitate postural reactions and the development of motor skills;
- assists the teacher in employing specific techniques which facilitate more normal eating patterns;
- suggests alternate methods of teaching dressing skills;
- suggests modified equipment which allows independence, provides comfort or decreases the risk of deformity;
- recommends and/or obtains writing aids, typewriters, technical aids;
- develops a communication system in conjunction with speech pathologist.

4. Ophthalmologist

- diagnoses and treats deficiencies, diseases, and injuries of the eyes;
- performs a variety of tests to determine vision loss, and the nature and extent of injury or other disorders;
- prescribes and administers medications and performs surgery;
- directs remedial activities to improve vision by instructing patients in eye exercises, and writes prescriptions for corrective glasses.

5. Optometrist

- examines patients' eyes to determine visual efficiency;
- locates and measures defects in vision;
- refers patients to appropriate medical practitioner if signs of ocular disease are detected;

- prescribes eyeglasses, contact lenses, eye exercises, and other treatments that do not require drugs or surgery;
- counsels patients regarding visual hygiene, lighting arrangement, working distances and safety factors.

6. Physiotherapist

- concentrates on posture and locomotor skills with particular emphasis on walking;
- in conjunction with other medical personnel, determines the need for supportive devices to assist in ambulation or to prevent deformities;
- employs exercise programs and positioning to prevent contractures;
- usually recommends and/or obtains ambulation equipment such as wheel-chairs, crutches, canes;
- recommends transfer techniques, both assisted and independent.

7. Psychiatrist

- medical practitioner who studies, diagnoses and treats diseases of the mind;
- examines patient to determine general physical condition, using standard medical procedures;
- orders laboratory and other special tests such as skull x-rays, psychological and electroencephalographic tests;
- formulates and directs treatment programs, including psychotherapy, psychotropic medications, group and milieu therapy.

8. Psychologist

- conducts psychological studies through the use of individual intelligence, personality, aptitude and other tests;
- appraises the student's social and emotional adjustment, through testing, observation and interviews;
- arranges for additional clinical assistance if necessary;
- provides consultation on management of student learning and behavioral problems;
- interprets diagnosis to home and school, and in consultation with other specialists recommends appropriate program and/or placement for maximum learning by students in special and regular classes;

- assists teachers and others in implementing programs for individual students by acting as an advisor regarding methods of instruction and appropriate materials.

9. Reading Specialist

- interprets data pertaining to educational achievement;
- provides assessment of individual achievement levels, analyzes the student's reading process, and determines repertoire of reading-related skills;
- develops programs in reading process and related areas of language and perception.

10. Rehabilitation Practitioner

- works under the direction of the teacher;
- assists in conducting and completing functional/behavioral assessments of student needs;
- assists in developing and implementing rehabilitative plans for activities such as toileting and other self-help skills;
- assists in observing and maintaining records of student progress;
- performs other duties as assigned by teacher.

11. School Counsellor

- provides personal and vocational guidance and counselling;
- provides consultative services to parents and teachers regarding student behavior and management;
- assists in referral, assessment and placement of children in special education programs.

12. Social Worker

- studies and evaluates the social environment of the student;
- uses casework skills in developing a positive approach to assist the child and the family;
- works with community agencies and government programs on behalf of students;
- deals with socially-maladjusted students, family concerns, non-attendance and other problems related to student social development;
- deals with child protection and apprehension.

13. Speech and Language Pathologist

- assesses, diagnoses, and remediates communicative disorders involving the areas of voice, articulation and fluency;
- diagnoses and remediates communicative disorders involving receptive and expressive language;
- advises parents and teachers regarding language and speech development for the child at home or at school;
- advises parents and teachers regarding nonverbal communication systems and devices.

14. Student Aide

- may be assigned from a college or university as part of a practicum experience;
- may obtain high school credits on a work experience basis or as part of a special projects program;
- may serve in a school on a volunteer basis;
- may provide individual diagnostic teaching depending on course requirements;
- may provide classroom maintenance;
- may assist teacher with special demonstrations;
- may assist with mathematics or reading drill, etc.

Note: The classroom teacher usually instructs, observes and evaluates the student aide.

15. Teacher Aide/Paid Aide

- assists students to understand and follow teacher's instruction;
- helps students with special needs, e.g. toileting, behavior management;
- prepares materials;
- distributes materials;
- performs various clerical and other supportive duties in the classroom;
- provides noon hour and bus supervision;
- performs other duties as assigned by the teacher.

Aides have varying levels of training and expertise. Emphasis should be placed on personality and human relationships, the ability to organize and communicate with students, flexibility and a willingness to learn.

16. Volunteer

- may be drawn from anywhere in the community and have varying levels of training and experience;
- may include parents, secondary or post-secondary students, retired professionals, senior citizens, service groups or clubs;
- may tutor one student under the supervision of the teacher;
- may assist the teacher in areas such as music, art and crafts;
- may assist in the lunchroom, on the playground, in recreation programs;
- may assist on field trips or other programs.

C. SUGGESTIONS TO TEACHERS FOR EFFECTIVE USE OF AIDES

1. Treat the aide as a special person in the classroom, not as a helper. The students will treat the aide as you do.
2. Be certain that the aide understands the objectives of the program and knows her duties.
3. Prepare a clear schedule for the teacher aide.
4. Communicate: discuss objectives and duties as problems occur.
5. Give praise for a job well done.
6. Provide a variety of tasks since many are very routine.
7. Give the aide the same support and loyalty that you expect from her.

D. THE TEACHER'S RESPONSIBILITY

The responsibility of meeting student needs and carrying out programs necessitates awareness and understanding of each individual within the class, and knowledge of which member of the support team will be of the greatest benefit to that individual at any given time or circumstance. Whether auxiliary help in the classroom is a teacher aide, a volunteer, or a professional, the teacher remains the manager and the decision maker in the teaching situation. The teacher maintains the responsibility for the student's program but may use the expertise of various support personnel. It is necessary for each teacher to be aware of available services within the school and the community.

It is also the teacher's responsibility to ensure that:

1. Communication between teacher and support person is open; they should be able to exchange information about students, and discuss their own relationship.
2. Daily planning and evaluation conferences occur between teacher and teacher aide or volunteer.
3. Other support personnel who are working with the student are included in information sharing, planning and evaluating, wherever possible.
4. The teacher aide understands what is expected of her, the philosophy of the school, and of the teacher to whom she is assigned, and the philosophy of the teacher in regard to disciplining the student.
5. Assignments for volunteers are specific and varied and make appropriate use of their special talents.

E. COOPERATION WITH OTHER PROFESSIONALS

Various school jurisdictions have established specific channels of communication. Usually, the teacher refers first to either the school counsellor or the principal. Referrals to community sources should be channelled through the latter; the principal is usually the point of contact for the flow of information to and from the school. It is still the teacher who knows the student, who has recognized symptoms of need, and who, in conjunction with the counsellor and principal, can recommend the type of assistance required.

Planning may involve the teacher in consultation meetings, classroom observation and in having various professionals in the classroom for short periods of time. The teacher or the school counsellor should be prepared to serve as team coordinator and should be able to give and accept suggestions, advice, and critical analysis of the total approach to the needs of the student without feeling threatened or becoming defensive. The best interests of the student are paramount; it is the teacher's responsibility to correlate input and apply the various recommendations to the student's program.

F. ORIENTATION AND EVALUATION

All support staff and volunteers should be provided with an orientation to the school, its policies, procedures and programs. The orientation should stress dependability, communication and responsibility. The issue of confidentiality must be addressed and clearly understood.

Evaluation of the support staff and volunteer program is a function of the teacher and administrator. The following points could be considered in such an evaluation:

1. Are the support staff/volunteers providing the kind of service anticipated?
2. Are the support staff/volunteers cooperative?

3. Do teachers need workshops designed to promote more effective use of support staff/volunteers?
4. Are support staff/volunteers dependable and punctual?
5. Are interpersonal communications effective?
6. Are program objectives being achieved?
7. Does the program meet the needs of students, teachers, support staff and volunteers?
8. Does the program warrant continuance?
9. Is there a need for inservice education for support staff and volunteers? What type?

PRESCHOOL PROGRAMS
FOR THE
SPECIAL NEEDS CHILD

A. INTRODUCTION

All early intervention programs are based on the belief that environmental influences can either facilitate or impede child growth and development. Parenting practices and the expectations of care givers have been shown to have a powerful impact on the realization of a child's potential.

While an environment which optimizes development is required for all children, it is of critical importance to those children whose normal development is at risk due to one or more handicapping conditions. For these children early intervention and attention to their special needs is essential.

A growing acceptance and understanding of the critical nature of the early years and of the role of parents in stimulating their child's development has resulted in greater emphasis being placed on working with parents in programs for children with special needs. These programs attempt to prepare children for a life as normal and free from restrictions as possible within the limits imposed by the handicap. The learning experiences provided are based on normal patterns and sequences of development. Teachers who work with these children must recognize that their needs do not differ significantly from those of other children.

B. SCREENING, ASSESSMENT AND PLACEMENT

To be effective, an intervention program should begin as soon as the special needs have been identified. In Alberta, infant stimulation programs may be provided through local health units. These programs are designed to provide professional support to the families so they can cope more positively with the handicap and, at the same time, develop the child's capabilities.

Some handicaps are obvious at birth, while others may not be detected until later. A public health nurse may be the first person to identify the child's handicapping conditions. A screening instrument, usually the Denver Developmental Screening Test, is given to all children at the age of three or four by most local health units. The public health nurse thus becomes an important source of information and support to parents when a suspected developmental delay or other area of concern requires further assessment.

Assessment should involve observations and diagnosis from more than one specialist. Where possible, the assessment should involve a team which may include a psychologist, a pediatrician, a child development specialist, a social worker and one or more therapists. A multi-disciplinary approach is extremely important for comprehensive program planning and is useful in selecting an appropriate placement for the child.

Because parents are the best source of information about their child, they can contribute to the screening, assessment and program decisions for their children. Following an assessment, parents should meet with the team to discuss the needs of the child and to determine the program requirements. Problems with confidentiality of assessment data seldom arise when parents are involved in assessment and case conferences.

C. NEEDS IDENTIFICATION

Information sharing between parents and the professional team, through regularly scheduled case conferences will also ensure that the special needs of the child and family are met through a carefully planned and coordinated program. This team will identify the service and resource needs, formulate the goals and develop action plans to see that the program is implemented. Specific tasks will be outlined and responsibilities assigned to various members of the team. At each case conference reports are shared and the child's progress determined as a basis for further program planning.

An understanding of family needs is essential since the child's program must always take into account existing family structures. Consideration must be given to adequate health care, nutrition, housing, employment, recreation and parents' feelings of self-worth. Sometimes physical resources can be brought in to the home to be used where needed, for example, low toilet seats or support bars.

Staff needs must also be identified and resources matched to meet them. Greater emphasis on working with parents may mean that staff members will require additional training to help them interact and communicate effectively. Simply learning about children does not automatically ensure that teachers know how to work cooperatively with parents and form effective parent/teacher partnerships. While parents ought to be viewed as the primary source of help for their child, professionals can be trained to assist them in their role.

D. UNDERSTANDING REACTION TO CRISIS

Those who work with parents of special needs children must try to understand what it means to be the parent of a child with an identified handicap. These parents endure feelings and continuing pressures which are largely unknown to parents of "normal" children. They will usually experience several stages of reaction to crisis before arriving at a point where they are ready to participate actively in their child's program.

Five stages of reaction to crisis (Luterman, 1980) can be related to parents of special needs children in the following way:

1. Initial Shock: On learning of a child's problem, parents usually experience a sense of unreality. They know that the disability is real but have divorced their feelings from that knowledge. They are unable to absorb information about treatment, placement, etc.
2. Stage of Grieving: Parents experience a deep sense of loss for the cherished dreams that must be given up, personal goals and plans that must be altered. There is a feeling of being overwhelmed by the responsibility of parenting. Feelings vary from confusion to anger to guilt. Confusion is felt because there is so much new terminology to learn; anger is felt because of the loss of control of one's life and the "Why me?" reaction sets in; and guilt is felt and parents begin to play the "Blame Game" with each other.

3. Stage of Denial: Denial serves as a defense mechanism. This is when the search for miracle cures begins. Parents may become angry with professionals working with the child.
4. Acknowledgement Stage: Parents finally acknowledge their child's problem. It means that they are now feeling more confident about their ability to make decisions to deal with problems.
5. Constructive Action Stage: The parents personal resources can now be fully mobilized. The parent is ready to learn new behaviors, absorb information and participate fully in the child's progress.

Communication is the key to helping parents come to terms with their feelings. Counselling should be available to assist them. Professionals who interact most successfully with parents are those who are generous with their ideas and opinions, and also grant parents the right to reject those opinions. Opinions should be given as opinions rather than as definitive answers or pronouncements. Questions to parents should be simple, direct and to the point. The use of jargon and giving too much information at one time should be avoided especially during the initial stages of reaction to crisis. Parents must be allowed the time to assimilate the information gradually and to work through their own feelings.

A positive approach by professionals also helps to build parent confidence. As soon as parents are able to assist in the development of program goals and to make program decisions, they should be encouraged to do so. With increasing confidence and a lessening of dependence on the professional and appropriate training, parents may be able to assume the role of advocate for their own child.

E. CHILD'S PROGRAM

Any program for young children must be designed to develop the whole child - socially, emotionally, physically and intellectually. Whether it takes place in a home, in a center, or in both, there must be a balance between child and adult-directed learning activities.

The development of specific skills will often take longer to achieve than with "normal" children and requires a careful analysis of the steps involved. To achieve this, the tasks must be broken down into small parts. It is important to introduce the task at the child's level of mastery, building on what he can already do and what he must learn to do next. Once the skill is mastered, opportunities must be provided for the child to practise the skill in a variety of activities with other children.

For parents to follow through with appropriate activities at home, it is necessary for them to understand how specific skills are taught and how they are applied in a natural play setting motivated by the child rather than the teacher or other adult. In this way, the program strategies are consistent and the child's learning receives reinforcement.

F. LEVELS OF INTEGRATION

In many instances an individual program may be required. Auxiliary staff may provide one-to-one instruction. During this time the child is not integrated into the rest of the program. This should be followed, however, by integrated activities with other children whenever possible. The amount of one-to-one instruction is one of the factors which affects the degree of integration.

When a special needs child is to be introduced into a program, the staff must prepare the other children. Regardless of the nature of the handicap or the degree of integration planned, an honest explanation of the child's problems will encourage successful integration. Young children are very accepting and generally helpful when they understand that a particular child is experiencing difficulties.

G. MEETING STAFF NEEDS

Although special programs place heavy demands on teachers' time, energy and skills, they need not work alone with these children. A team approach which brings together other professionals and paraprofessionals can be very helpful in meeting the teacher's need for assistance and support. The team must be well informed about the programs and services being provided to the children in the program and whose responsibility it is to carry them out. Regular staff meetings and staff development plans are essential. These meetings should be organized so that everyone on the team has an opportunity to suggest agenda items and to contribute to the discussions.

Staff development activities could include: training workshops; opportunities for other professionals involved with the special needs child to explain their involvement; opportunities for staff to observe other programs that provide specialized services; and access to journals, new text books and other professional literature.

H. EVALUATION AND CONTINUITY

A child's achievement should be measured only against the previous performance. Auxiliary staff can assist by compiling daily records. These records form the basis for the teacher's reports provided to parents and other team members.

Case conferences provide an opportunity for all persons working with a child and/or family to participate in the evaluation of a program. The observations of the teacher, aide, therapist, as well as the parents, all constitute an important part of this evaluation.

Regular case conferences also ensure a smooth and positive transition to a new setting. Alternatives are explored with the agencies and individuals involved. Parents, with the recommendations of professionals, should be allowed to decide which option best suits their family situation and is the most appropriate placement for their child.

I. REFERENCES

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ASSESSMENTS

A. TYPES AND PURPOSES OF ASSESSMENTS

There are several types of assessments commonly used in special education. Some of these are carried out by the classroom teacher, others by psychologists or other professionals. They may be formal or informal, norm-referenced or criterion-referenced, and so on. Several of these distinctions need to be elaborated.

Formal assessments for the most part are carried out in a special testing environment by a specialist examiner using standardized tests. This would describe the typical situation for psychological testing where a psychologist assesses a student in his office or clinic using various norm-referenced, standardized measures of intelligence. Formal assessments also may include medical assessments, audiological assessments, and so on.

Informal assessments, on the other hand, may very well be carried out by the classroom teacher in the classroom using informal, criterion-referenced measures. This would be typical of many assessments carried out to determine entry-level skills in various instructional programs or to determine the degree of growth toward criteria which has taken place as a result of training.

Both formal and informal assessments can be useful. Formal assessments are frequently used for making important decisions concerning admission to special programs, eligibility for special funding, or the need for special support services. They may also provide useful information for program design by indicating current achievement levels as well as by identifying patterns of strengths and weaknesses in the student's learning abilities. The formal assessment may yield a psychological profile providing information about learning style, perceptual problems, and so on, which can be helpful to the teacher in program planning.

Informal assessments are more frequently used for program planning at the classroom instructional level. Informal measures can be used to determine entry-level behaviors, as well as to monitor the effectiveness of instructional programs. Because they are generally criterion-referenced rather than norm-referenced, they do not usually provide quantitative comparisons with other students, but do provide much of the information that teachers need for day-to-day planning and teaching. It is important that special educators be aware of the distinctions made here. They should not underestimate the importance of formal assessments, but neither should they expect formal assessments to tell them all they need to know for planning in the classroom. They should be able to derive as much information as possible from assessments done by other professionals, and be able to supplement this with information from their own informal assessments.

B. SOME SPECIAL CONSIDERATIONS

Caution should be exercised regarding assessments and the interpretation of test results. The nature of tests as samples of the behavioral repertoire and the circumstances surrounding the administration of the tests should be considered.

1. Assumptions About the Learner: Static or Dynamic

The interpretation of test results will be influenced by the assumptions that are made about the learners. For many years, it was assumed that intelligence was innate and relatively unchangeable. The learner could be expected to learn more, but his rate of growth (IQ) would remain constant and it would be possible to predict the maximum level of achievement he would attain at maturity. The current, widely-held view is quite different. It is now believed that growth and development take place through interaction between the learner and his environment, and that rate of learning can be influenced by experience and training. If this is so, then test results such as IQ scores will be treated as somewhat tentative measures. They will be seen as indicators of the student's current functioning level, which may well be enhanced through appropriate educational programming.

2. Testing as Sampling of the Behavioral Repertoire

Any test that is included in an assessment battery is only a sample of a set of behaviors or body of knowledge that could be assessed. On the basis of the student's responses to the test sample, inferences are made about his knowledge or level of skill. For example, on the basis of the student's ability to read a sample of forty words, inferences can be made about his ability to read words in general. On the basis of his responses to perhaps six or seven short-term memory items on an intelligence test, inferences can be made about his short-term memory.

It is apparent that care must be taken in choosing the samples used in assessing behavior. First of all, the sample must be of sufficient size to justify the inferences made. It would be unwise to make judgements about a particular skill on the basis of a sample which included only one or two questions. One could have more confidence in a more extensive sample. It should be borne in mind that assessment results can be subject to some fluctuation or "error" arising out of the fact that tests are, after all, only samples. Generalizing or predicting from the results of a standardized "psycho-educational" instrument to an educational setting should be done with caution; those variables measured by the standardized test and those which influence skill/concept attainment for every student are rarely identical.

Another concern is that the test items included in the sample be fair items considering the background of the student being tested. With all norm-referenced tests, in which the individual student is compared to a larger group of other students, it is assumed that all students tested have had a common background of experiences and therefore an equal opportunity to learn. It would be unfair and misleading to administer the test to a student who has not had those experiences. The culturally different student, for example, may compare quite unfavorably to students from the dominant culture not because he is less able to learn, but because he has not had the opportunities to learn those things included in the test sample. Similarly, deaf students may perform poorly on standardized intelligence tests when compared with hearing students, not because they are less intelligent but because they have not had the same background of experiences. For them, the test being used may be an unfair and inappropriate measure.

It is important to distinguish between screening tests and in-depth assessments. There are many tests, usually short and easy-to-administer tests, which serve as screening devices. They should not, however, be considered adequate assessment devices for special educational planning. For example, a short intelligence test, such as the Slosson test, can be useful in identifying students of normal intelligence and others who may be mentally handicapped. These latter students, however, should receive more extensive assessment before a diagnosis of mental retardation would be justified. Again, a short screening test with a pure-tone audiometer may be sufficient for identifying students with possible hearing problems, but there would then need to be a more thorough assessment by an audiologist to diagnose the nature and extent of the problem and make recommendations for program planning.

If there is to be a long delay before an in-depth assessment can be made, there may be circumstances under which screening instruments could be used for placement purposes. It might be argued, for example, that a student with an obvious hearing impairment could be enrolled in a special program for the hearing impaired even before a thorough diagnosis of the exact nature of his disability has been made. Again, a student of apparently normal intelligence but significantly below-grade achievement in reading skills could be enrolled in a resource room program for the learning disabled even though an in-depth assessment has not yet been made. Generally speaking, however, screening devices should be considered as preliminary measures only, with important decisions being based on more thorough and more reliable assessments.

3. Test Situation Variables in Test Performance

An individual student's performance during assessment can be affected by factors in the testing situation so that he does not perform as well as he might. Such factors can help to produce an unduly pessimistic picture of his abilities. Motivation would be one such factor. If for some reason the student is not well motivated, his performance will not reflect his true capabilities. A good clinician with extensive experience will likely be able to elicit optimum performance, or will recognize that motivation is not satisfactory and exercise some caution in the interpretation of results.

Assessments are often carried out in surroundings that are quite strange to the student, by persons unknown to him. It is difficult to say how these strange circumstances influence test results. On the one hand, some students, whose behavior and performance are quite inadequate in everyday situations such as a classroom environment with a number of other students present, will "blossom" in the test situation where they receive the undivided attention of the examiner. For these students, assessment results may seem unduly high. On the other hand, some students may be frightened and upset during the assessment. They may not understand the examiner. They may be apprehensive about what is going to happen to them as a result of the testing. Factors such as these could have a negative influence on their test performance.

Test results should be interpreted in the light of these test situation variables, and test information integrated with information gathered from other, more familiar situations (home behavior, typical classroom performance, etc.). An adequate assessment will take into account data from several sources.

4. Interpretation of Results

Person(s) carrying out an assessment should interpret the findings to those who are to make use of them and indicate how the findings influence program planning. It is particularly important that reports of assessment be written in language which can be readily understood by the teacher, and not filled with technical jargon. In the event that assessment results are not clearly explained, teachers should be prepared to ask questions of the examiner. The list of other professionals in the section entitled "Working with Support Staff" outlines the major functions and areas of concern of other professionals who work with exceptional students. It should be helpful to teachers in understanding what they can reasonably expect to learn from these disciplines.

INDIVIDUAL PROGRAM

PLANS

A. INDIVIDUAL PROGRAM PLANS

1. Purpose

Individual program planning is an essential aspect of special education. Handicapped students have unique, individual needs which can only be met through an educational plan designed specifically for a particular student.

An Individual Program Plan (I.P.P.) ensures that:

- a. Valid identification of students requiring special education programs through assessment and evaluation is achieved by bringing together all of the agencies and disciplines involved with each student;
- b. Programs that meet the needs of the student are developed using a multi-disciplinary approach;
- c. Parents understand their child's educational program and can give informed consent;
- d. Program accountability is achieved by building into each student's I.P.P. goals and objectives, evaluation standards, and timelines;
- e. A flexible and more appropriate program results from the continuous evaluation, review and revision that is inherent in the I.P.P. process.

2. Process

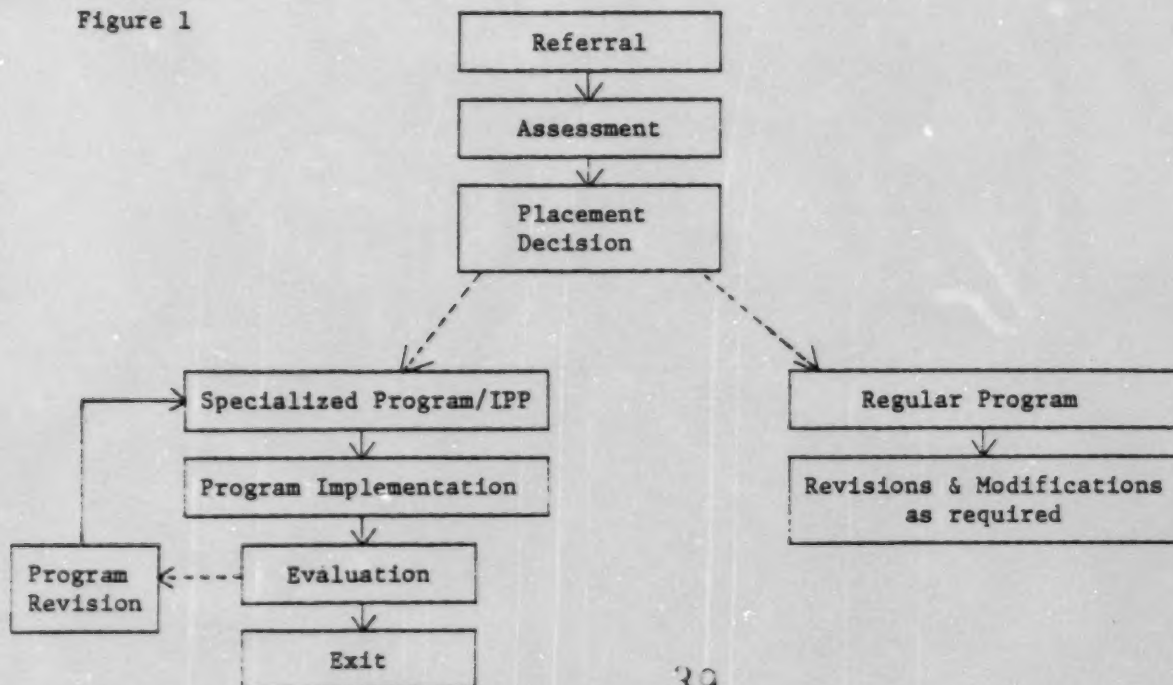
The I.P.P. process can be best understood by reference to the descriptions and flow chart (Figure 1). It includes:

- a. Referral: The initial referral may come from a variety of sources: teacher, parent, or community agencies. Parental consent for assessment should be procured before moving to the assessment phase;
- b. Assessment: One person should be responsible for coordinating all assessment activities. This will include assembling previous assessment reports and obtaining new assessments from those professional sources that are appropriate to the student's needs. An assessment meeting should be called at which time a composite assessment of the student's needs can be formulated;
- c. Placement Decision: As a result of the assessment findings some students may require placement in a special education or regular classroom. Those in a regular program may still require the development of an I.P.P. because of particular handicaps.

- d. Specialized Program/I.P.P.: For students in a special education program an individualized program should be planned by the professionals (teachers, psychologists, physician, etc.) involved with the student. The General Service Plan which records the results of the program planning is outlined on page 33. Parental consent should be obtained, preferably in writing, for its implementation.
- e. Program Implementation: The teacher(s) of the student is/are responsible for the implementation of the program. Planning the Implementation/Instructional Plan is outlined in section B.2 (page 34);
- f. Evaluation: The General Service Plan and the Implementation/Instructional Plan each contain specific goals or objectives and related evaluation procedures at specified times. These evaluations, which constitute on-going assessment of the effectiveness of the student's program, must be carried out on a regular basis.
- g. Program Revision: Should the results of the evaluation point to a need for program revision and continuation, the I.P.P. should cycle back to the Specialized Program/I.P.P. level;
- h. Exit: Should the student meet all of the goals contained in the General Service Plan the student should exit from one special education program and enter another, or a regular program. It is strongly recommended that all of the professionals assisting in the development of the General Service Plan be involved in the Exit procedure.

Flow Chart

Figure 1



B. PREPARING I.P.P.'s

This section describes the I.P.P. in more detail: the General Service Plan, the Implementation/Instructional Plan, and Evaluation methods. It provides sufficient practical advice for teachers to develop I.P.P.'s for their students.

1. The General Service Plan

The General Service Plan (see sample, page 37) identifies the comprehensive education program for the student in terms of goals and modifications and includes:

- a. Summary statement of present level of performance including strengths and weaknesses;
 - (1) assessment of:
 - educational achievements
 - cognitive/intellectual abilities
 - physical skills
 - social-emotional-behavioral development
 - medical conditions,
 - (2) establishing student needs:
 - careful analysis, summary and comparison of all the data collected
 - checking on the validity of the data across and within tests, and concurrent support from informal assessments
 - ensuring that decisions are not based on a single test score; obtaining at least two sources of supportive evidence
 - examining the student's level and manner of functioning in comparison with his peers and those in the instructional setting in which he will be in regular class,
 - (3) prioritizing student needs - including:
 - parent's primary concerns
 - teacher's primary concerns
 - developmental sequence of skills to be taught
 - the specific behaviors most readily changed (determined by baseline data, strengths, weaknesses, and student's learning styles)
 - critical needs that involve risks (or harm) to the student and/or others;
- b. Annual goal statements - General statements of where the student is expected to be in one year;
- c. Special educational services required;
- d. Amount of time in regular and special program;
- e. Time line - Starting and termination dates for the specialized program (each goal or service may require different estimates of time);

- f. Person responsible for each goal/service area (this person may not be responsible for all objectives and tasks within the goal but is responsible to see that all objectives and tasks are delegated and performed);
- g. In addition, the following may occur while establishing the general plan:
 - (1) recommendations for implementation plan
 - (2) recommendations for methods/materials;
- h. Evaluation criteria for the goals.

2. The Implementation/Instructional Plan (see sample, page 39)

This provides specific steps for implementation of the General Service Plan. With some students, there may be only one goal in the General Service Plan; therefore, there will need to be one set of objectives in the Implementation or Instructional plan. There may also be three or more prioritized goals and correspondingly greater number of specific objectives in the Implementation Plan.

As a general rule, there should be a separate implementation plan form for each annual goal in the General Service Plan.

- a. Short-term behavioral objectives:
 - (1) representing, initially, the most critical needs of the student;
 - (2) including living/vocational skills, communication, computation and other areas, depending on student needs;
 - (3) describing target behavior, conditions and criteria or level of competency.

The Implementation Plan may also include a task analysis for each objective;

- b. Strategies, materials and/or resources;
- c. Time line for each objective - several periods of time within the long-term goal; may be according to reporting periods, e.g. monthly, bi-annually;
- d. Criteria for evaluating.

3. The Evaluation

- a. Short-term or process evaluation or day-to-day monitoring of the target behaviors of the short-term objectives:
 - (1) including:
 - checklists
 - behavior logs, charts
 - criterion referenced tests
 - informal, subjective evaluations,

- (2) as each objective is mastered, the date should be recorded before proceeding to the next objective.
 - (3) if objective is not being achieved, it must be reconsidered:
 - is it realistic?
 - is it necessary to break down into more attainable components?
 - are strategies and techniques appropriate?
 - are resources effective?
- b. Annual or product evaluation: this occurs at designated times, and is intended to compare pre- and post-performance;
- (1) it includes:
 - behavioral observation
 - checklists
 - norm referenced tests,
 - (2) it consists of a consideration of the base line data (level of performance on the General Service Plan), the instructional objectives on the Implementation/Instructional Plan, and the recent evaluative data,
 - (3) it may be the culmination of the I.P.P. or the link between the implementation of the I.P.P. with the revised implementation in the next year. As long as the student requires special education or related services, the I.P.P. is an ongoing process.

If the short-term objectives and the annual goals have been met, the following questions should be asked:

- What goals and objectives will best serve as the next steps to progress in the student's education?
- Is the student reaching a point where he can exist in the regular educational program without special education or related services?

If the short-term objectives and the annual goals have not been met, the following questions should be asked:

- Were the goals reasonable? If not, what goals would be more reasonable for the following year?
- Did the implementation of special services begin at an appropriate level for the student? If not, at what level would further programs begin?
- Did the student have the prerequisite skills for the program implemented?
- Were the steps of implementation too large for the student? If so, how can the steps be broken down?
- Were the materials, methods, and procedures efficient and effective? What changes in these can be recommended?
- Did the teacher use the materials properly?
- Was the assignment of responsibility in the General Service Plan and the Implementation Plan appropriate for achieving the goals? If not, how can it be amended?

- Did the teacher follow the I.P.P.?
- Were the criteria set for matching the objectives and goals appropriate?
- Did the student make gains in other areas which were not a part of the goals and objectives?
- How can the General Service Plan or the Implementation Plan be revised to better meet the student's needs?
- Did the student assume some responsibility for his progress?
- Did the home reinforce the objectives?

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SAMPLE PLANS

The following are sample plans only. School systems are encouraged to develop their own plans, or adapt these to suit their needs.

SAMPLE - GENERAL SERVICE PLAN

NAME: _____ BIRTHDATE: _____ AGE: _____ SCHOOL: _____ GRADE: _____

DATE OF ENTRY INTO PROGRAM: _____ LEGAL STATUS (foster child, temporary ward, etc.) _____

Summary of Present Levels of Student Performance: _____

Program Model

Hrs./Wk.

Entry

Periodic Reviews

Special Education

Regular Education

A. Curriculum Areas

Note: Insert areas that apply to the individual student.

Subject	Placement/ Teacher Responsible	Curriculum Goals and/or Modifications	Review Date (Mo.-Yr.)	Comments
1. Living/Vocational Skills - - - -				
37 2. Communication/ Language Arts - - - -				
3. Computation/ Mathematics				
4. Social Studies				
5. Science				
6. Art				
7. Music				
8. Physical Education				
9. Other - - - -				

B. Support Program

Note: Insert areas/activities that apply to the individual student.

Area/Activity	Goals	Special Services/ Person Responsible	Starting Date	Review Date (Mo.-Yr.)	Comments
1. Counselling					
2. Co-curricular Activities					
3. Behavior Management					
4. Speech Therapy					
5. Occupational Therapy					
6. Physiotherapy					
7. Medical Treatment					
8. In Home Program					
9. Parent Education					
10. Other					

GENERAL SERVICE PLAN COMMITTEE:

Special Class Teacher: _____

Parent/Guardian: _____

Classroom Teacher: _____

Student Services: _____

Principal: _____

Other: _____

NOTE: Signatures indicate only that you are familiar with the goals.

SAMPLE - IMPLEMENTATION/INSTRUCTIONAL PLAN

NAME OF STUDENT: _____

PROGRAM GOAL: _____

Objective(s) & Criterion Level	Materials, Strategies and/or Resources	Date Started	Date Reviewed	Evaluative Comments
48				49

BEHAVIORAL OBJECTIVES

AND

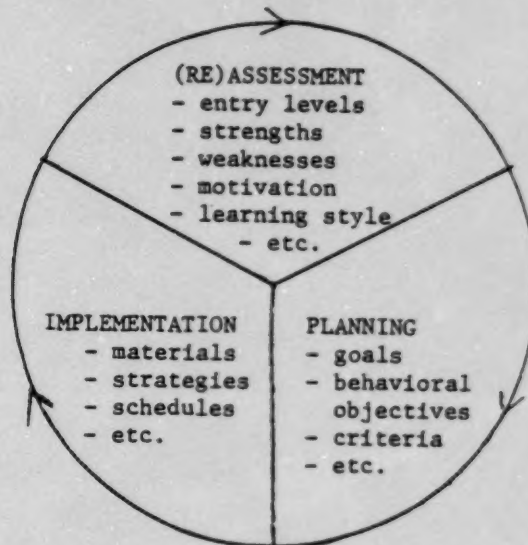
TASK ANALYSIS

50

A. INTRODUCTION

Each of the special education curriculum guides emphasizes the development of individualized/personalized programs. Students in special education settings have unique learning problems that require teaching programs designed individually. The diagnostic/prescriptive teaching model, as diagrammed below, is applicable in all special education settings.

DIAGNOSTIC/PRESCRIPTIVE TEACHING CYCLE



Informal assessment, as described in the section on assessments, involving checklists, teacher-made criterion-referenced tests, and other measures of instructional effectiveness, is an integral part of this model, as well as careful task analysis.

There is also a need in special education programs for group experiences. Each person responsible for program planning for exceptional students must strike a balance between intensive, individual instruction and group activities, bearing in mind the practical limits imposed by the availability of staff, the attention span of the students, the stamina of the teacher, etc.

Not all teachers are knowledgeable about the use of individualized/personalized programs. There is a need for preservice and/or inservice preparation if teachers are to be more effective in this kind of instruction. This section gives a background of information about two important concepts which are basic to such teaching: behavioral objectives and task analysis.

B. BEHAVIORAL OBJECTIVES AND TASK ANALYSIS IN SPECIAL EDUCATION

This section describes a practical approach to the development and use of behavioral objectives, task analysis, criterion-referenced assessment and individualized instruction in special education. The first part of the discussion describes the various types of behavioral objectives, their advantages, disadvantages and construction. Guidelines for the construction of instructional objectives are summarized in the checklist at the end of the discussion.

1. Types of Behavioral Objectives

Terminal behavior (instructional or educational) objectives describe the observable measurable behaviors a learner will be able to perform at the end of an instructional unit or program. An enabling behavioral objective describes the sub-skills a learner must acquire to enable him to progress from his current level of achievement to a terminal behavioral objective. Terminal behavioral objectives, found at the end of an instructional module, are usually quite detailed and make an explicit statement about (a) a learner's performance, (b) the conditions under which he performs and (c) the standards of performance he must achieve. The following is an example of a terminal behavioral objective.

Given line drawings of geometric figures, 6 mm high, (circle, ellipse, square, rectangle, parallelogram, triangle, and diamond) presented in a straight line, four at a time, (three identical, one different; randomly located), the learner marks the one that is different. Given three trials where each figure is compared with each of the others, the learner should obtain at least two out of three correct for each figure and no less than 50 out of 60 correct for all figures.

This objective describes the conditions that the learner will be given (a specified number, size, shape and arrangement of geometric figures), the observable behavior that the learner will perform (mark the one figure that is different) and the standards that he must achieve (number correct). Since learning can be inferred only from a change in behavior, all instructional objectives focus on a precise description of the learner's observable, measurable behavior.

Characteristically, enabling behavioral objectives, particularly when used in the early stages of program development, are not described in as much detail as are terminal objectives. Later, after a program has been tested with various learners, some enabling objectives may be expanded, revised or deleted and new objectives may be added. The following is an example of an enabling instructional objective:

Given a flash card presentation of each lower case letter of the alphabet, the learner will correctly name each letter.

Following several applications with a variety of learners, this objective may be further refined or modified to read as follows:

Given a flash card presentation of each lower case letter of the alphabet (25 mm high), presented three times, randomly distributed

over one week, the learner, within 2 seconds, will correctly name the letter (on the first try), two out of three trials correct for each letter; 70 out of 78 trials correct for all letters.

2. Advantages of Behavioral Objectives

Behavioral objectives provide a basis for instructional programming. They describe the goals of instruction; task analysis determines the means of attaining these goals. Task analysis involves the analysis of a behavioral objective to determine the essential prerequisite skills required to achieve the objective. Of course, there are many different routes to the same objective; explicitly detailed instructional objectives increase the likelihood that each of the various routes of instruction will provide the learner with, at least, the minimum essential skills to enable him to reach the behavioral objective. In a similar manner, terminal and enabling behavioral objectives assist in the selection of appropriate teaching materials, activities and methods. These advantages, while leading to consistency of interpretation among various teachers working towards the same goal, do not prevent the exercising of creative innovation or enrichment beyond the acquisition of essential skills. Neither do educational objectives stifle spontaneity; in fact, having a clearly defined educational objective permits a teacher to detour scheduled instruction to take advantage of some chance event and then to return to instruction without losing continuity.

The construction of behavioral objectives can be an elucidating experience. Otherwise vague, implicit, trivial, irrelevant or value-laden goals can be made explicit, evaluated and modified or replaced with objectives describing essential skills and knowledge. Objectives facilitate communication among teachers, and between teachers and parents, teachers and learners, and teachers, administrators and program evaluators. A school report card using behavioral objectives describes precisely what a learner can or cannot do. This information indicates where to begin testing and/or teaching to avoid redundancy or omission. When objectives are available for study before instruction begins, they can be used with mature students as advance organizers describing the purpose of instruction and specifying what is expected from the learner. The learner may thus prepare himself for the instruction that follows. Following instruction, objectives can be presented to learners as post-organizers assisting review of the material and providing the opportunity for self-evaluation.

In the development of individual program plans (I.P.P.), a behavioral objective not only provides a clear statement of individually suitable goals of instruction, but also provides a well defined structural aspect of the curriculum that can be empirically validated and revised to improve instruction and evaluation. Behavioral objectives are the basis of criterion-referenced testing and instruction in which teaching and testing become continuous, complementary activities so that learners are taught all that they need to know without teaching them what they already know.

3. Problems with Objectives

Not all instructional objectives are well written: in fact, many of the so-called behavioral objectives described in commercially available instructional

materials and criterion-referenced tests are poorly written. The following objective is an example of a commonly found "behavioral objective". Study the example carefully and think of what you would teach or test if given this objective.

The learner will separate correctly, similar objects into categories, e.g. different chairs and tables.

This is a very important objective in concept learning where learners are taught to discriminate relevant from irrelevant characteristics of objects while classifying members of different categories. Study the objective again; would the teacher down the hall be justified in teaching something entirely different from what you would have taught?

This objective, although common in its form and attractive in its simplicity, does not describe sufficiently what the learner is to be taught. For example, the objective does not specify how many categories of objects the learner must classify, how many objects there are within each category, how similar the categories are, or how similar the objects are within each category. Also, as is often the case, the objective does not describe any standards of performance that the learner must achieve before advancing to the next level of instruction.

Is it necessary to specify all of this detail; could not any capable teacher make some reasonable assumptions about what to teach? The answer to both of these questions is, "Yes". The problem is, that without sufficient information, there are many reasonable assumptions that one might make. For example, one teacher may simply teach the discrimination of tables and chairs as suggested in the objective. Another teacher may teach the classification of various seating devices such as arm chairs, rocking chairs, stools, benches, hassocks, couches and saddles. Other teachers may interpret the notion of objects in a different sense and introduce geometric forms or animals.

What skills did the author of the objective intend to be taught when he wrote the objective: some, all, or none of the above interpretations? What skills should be taught to ensure that the learner acquires the minimum essential prerequisites before proceeding to the next level of instruction? This decision should not be left to intuition.

Although instructional objectives may be tedious and time consuming to write, there is an obvious advantage in attempting to obtain a reasonable degree of specificity. An instructional objective is sufficiently specific when two or more competent teachers, independently given the objective, would test and teach essentially the same skills and knowledge intended by the author of the objective. One must also remember that there are many different routes to the same goal.

4. Parts of Behavioral Objectives

Terminal instructional objectives are comprised of three parts: conditions, performance (observable, measurable behaviors), and standards (criteria). In

the following discussion, some technical (and perhaps tedious) details about instructional objectives will be reviewed; an important point to remember throughout the discussion is that instructional objectives should be AS SIMPLE AS POSSIBLE AND AS DETAILED AS NECESSARY. At the end of this section guidelines will be presented for determining the amount of detail required in educational objectives.

The performance part of an objective describes the observable, measurable behavior that the learner will perform at the end of an instructional unit or program to demonstrate that he has acquired the skill or knowledge described in the objectives. Frequently the goal of instruction is to teach or to be aware of a particular knowledge or skill. These activities, however, are covert and one cannot be certain, therefore, if the learner has achieved the desired state of understanding. In addition, there are many different ways to interpret the meaning of terms such as "to understand" or "to appreciate". Because these states or processes are not observable and because they are subject to various interpretations, they should not be used in behavioral objectives. Thus, given the goal "to teach the student to demonstrate that he understands the concept of 'over'", one should clarify the meaning of "to understand" by stating what observable, measurable behavior the student will perform to demonstrate his understanding. For example, the goal may be restated in the form of a behavioral objective such as:

Given a number of random presentations of various objects (e.g. a hand, shoe, pencil or book) held beside, under, on, or over a referent object (e.g. a chair, table or book) the learner will state if the object is "over" or "not over" the referent object.

During the development of an instructional objective, there are several guidelines that can be used to assist in the selection of a suitable method of performance. First, one should attempt to select the simplest method of performance that will fulfill the most difficult commonly found conditions. Frequently, the manner in which tasks are usually performed is not the simplest method. For example, many people tie the straps of an apron behind their back; a simpler method is to tie the straps in the front and then rotate the bow to the rear.

The latter technique is far simpler than the former to teach to a mentally handicapped adolescent. Before assuming that the method used to perform a task is the simplest, or the best method, experiment and/or study the behavior of some adequate and inadequate performers.

A second consideration is to select a method of performance that will require the least amount of learning of new skills and unlearning of old habits; that is, select a method that is congruent with the learner's current skills. Thirdly, attempt to select a form of performance that will facilitate learning in other areas of instruction at the same time or at a later date. For example, the manner in which an individual learns to perform a skill may facilitate or impede the learning of other skills. Therefore, before selecting a particular method of performance, examine its potential relationship to other skills. Finally, and of particular importance to special education, attempt to select a method of performance that is the least stigmatizing and the most normative.

Terminal behavioral objectives also describe the conditions under which the individual will perform. The conditions described in an instructional objective specify the important objects or events, present or absent, that may assist or hinder the learner's performance. The conditions should be concisely described and yet be sufficiently detailed to avoid misinterpretation among various teachers. Conditions include instructional materials, social and physical circumstances, instruction (verbal and/or written), and a description of the presentation and response formats used. The conditions in a terminal instructional objective should describe the most difficult, commonly found situation in which the learner usually would be required to perform. Selection of conditions of this nature is particularly important in the field of special education where students are often taught to perform under simplified conditions that are rarely found in the general environment. For example, a student taught to tell the time from a clock face with twelve numbers or with one green and one red hand has not been given adequate skills to meet the demands usually found in the general environment. In addition to describing the most difficult commonly found conditions, the objectives should also describe the typical range of variations of these conditions found in the normal environment. Once again, if the student is not taught to perform under the common range of conditions, he will not be prepared to cope with the general environment.

Many instructional objectives describe only the performance and conditions and do not specify the standards of performance. As a result, there is no way to judge the adequacy of the performance. However, since testing is an integral part of effective teaching, educational objectives should specify the minimum essential standards of performance. Thus, to avoid attempting to teach the learner what he already knows and to ensure teaching all that he needs to know, a teacher should determine which essential objectives already have been achieved. Also, to assess the effectiveness of both teaching and learning, a teacher should assess the objectives that he has attempted to teach.

The fact that objectives describe the minimum essential standards does not mean that every learner should be equated to the lowest common denominator; each student should be given the opportunity realize his highest level of capability. In the area of special education, however, where economy and efficiency of teaching are required to accelerate learner progress, it is an advantage to know, as soon as possible, when a learner has achieved a minimum essential skill and when he is ready to progress to the next level of instruction. Thus, it is desirable to describe the minimum essential level or performance required at each objective, and to expand upon this level of competence whenever possible.

Usually, the standards specified in an educational objective describe the number or percentage of successful trials required. A better way to establish standards while ensuring consistency of performance is to describe the number of consecutive trials to be performed correctly. Sufficient trials should be tested to sample each of the conditions specified and to ensure that each type of performance reliably exceeds what would be expected by chance alone. Because

of the nature of some tasks, successful performance must be done within a limited period of time; thus, the standards may specify an appropriate period of time for test completion. As performance may slow down after instruction has been completed, it may be desirable to compensate for this slowing down by specifying, during instruction, that performance be achieved in a shorter period of time than will be required following instruction. On many tasks it may not be necessary to complete performance within a limited time period; some people, however, feel that rapid and accurate performance indicates the strength of a newly acquired skill and the likelihood that it will be maintained. In this case, it may be desirable to specify a time limit for performance.

The degree of accuracy required of a performance is determined by the manner in which the skill eventually will be used, the consequence of subsequent errors, and the situations that are likely to follow instruction, for example, the availability of opportunities for later review or assistance. One very important consideration in special education, where learners sometimes experience difficulty in maintaining newly acquired skills, is to specify that successful trials should be distributed over several days or weeks. For example, a terminal instructional objective might specify that ten consecutive correct trials (C.C.T.) be performed at the end of instruction followed by ten C.C.T. the next day, eight C.C.T. on the fourth, a sixth and tenth day, followed by five on the fifteenth, twentieth and thirtieth days.

The following checklist summarizes all of the major considerations one should make in constructing educational objectives. When using this checklist remember that instructional objectives should be as simple as possible and as detailed as necessary, and that a good objective is one that, if given independently to two or more competent teachers, they would test and teach essentially the same knowledge and skills. The major advantage of good instructional objectives is that they ensure that essential knowledge and skills will be taught and tested. This checklist may be used in the construction or evaluation of behavioral objectives.

Checklist for Constructing Behavioral Objectives

Conditions

The conditions specify:	<u>Specified</u>	<u>N/A</u>
1. what is <u>given</u> or <u>absent</u> that may facilitate or impede performance _____		
2. what instructional materials are required _____		
3. the social and/or physical circumstances _____		
4. the instructions provided (verbal and/or written) _____		
5. the presentation and response format _____		
6. the most difficult commonly found conditions _____		
7. the common range of variations among normative conditions _____		

Performance

The performance specifies:	<u>Specified</u>	<u>N/A</u>
1. the observable, measurable behavior, <u>not covert</u> knowledge, understanding or appreciation _____		
2. the simplest method of fulfilling the most difficult, commonly found condition _____		
3. a method of performance that requires the least amount of learning or relearning _____		
4. a method of performance that will facilitate learning in other areas of instruction _____		
5. a method of performance that is most normative and least stigmatizing _____		

(Checklist continued)

Standards

The standards specify:	<u>Specified</u>	<u>N/A</u>
1. the minimum essential level of performance _____		
2. the number of consecutive trials correctly performed _____		
3. the least number of trials required to sample each condition _____		
4. sufficient trials to ensure that each type of performance <u>reliably</u> exceeds what would be expected by chance alone _____		
5. time requirements, <u>if necessary</u> _____		
6. time requirements to ensure a well established, enduring skill _____		
7. the distribution of successful performance over time to ensure maintenance of the skill (e.g. rehearsal is performed on the first, second, fourth, sixth and tenth days) _____		
8. ensure that the accuracy specified has been determined by assessing the use to which the skills will be put, the consequences of errors, and the opportunities for review or assistance _____		

C. TASK ANALYSIS

Task analysis involves the process of analyzing an instructional objective to determine what essential sub-skills will enable the learner to proceed from his current level of performance to the instructional objective. The purpose of task analysis is to isolate the enabling skills so that they may be arranged into an instructional sequence incorporating instructional materials and strategies.

The following exercise will demonstrate the development of an instructional objective and the task analysis of that objective.

In each case, use paper and pencil and attempt to solve the problem before looking at the example provided.

Problem 1:

Given the goal, "to teach the learner to dial telephone numbers", construct a terminal behavioral objective.

Solution 1:

Of course there are a variety of behavioral objectives that could be written to interpret this goal. Because of the possibility of these different interpretations, it is imperative that, if a group of teachers are responsible for teaching the minimum essential skills involved in dialing telephone numbers, they should work together to develop one or more behavioral objectives that explicitly describe these skills. One solution to the problem is as follows:

Given:

1. a standard desk or wall telephone with a dial mounted on the body of the phone;
2. ten unfamiliar, seven digit telephone numbers printed separately on cards;
3. a familiar name to ask for (family name, sibling or friends);
4. a cooperating person to answer the telephone at each number printed on the cards;
5. three of each of the following situations (randomly presented over several days):
 - a. someone is using the party line for 3 - 10 minutes;
 - b. the number dialed is busy for 3 - 10 minutes;
 - c. there is no answer at the number dialed;
 - d. the cooperating person answers the telephone.

The learner will dial the correct number of calls (9/10) without error, without dialing over the party line, without listening to the conversation on the party line for more than three seconds, gently replacing the receiver in the cradle after a call, waiting from three to seven minutes before attempting a call when the other line is busy, and repeating a call if a wrong number is dialed.

Problem 2:

Again, before looking at the solution, use paper and pencil to perform a task analysis on the above objective; answer the question, "What minimum essential skills would a learner require to perform this task?". You may assume that the learner already possesses some related skills, these should be described as entry level skills.

Solution 2:

First, describe the learner's entry level skills in the form of one or more behavioral objectives. The presence or absence of these skills must be established before instruction in telephone dialing commences. If an individual does not possess an entry level skill, it must be taught before the program begins. If many potential learners do not possess a skill, it should be written into the instructional program. Some entry level skills may be obvious capabilities; some may be incidentally observed. The presence of other entry skills may be questionable and formal testing may be required. An example of an objective for an entry level skill follows:

Number matching: Given, randomly, three trials of each of the printed numbers from 0 - 9, the learner will put his finger in the corresponding hole on the telephone dial with 95% accuracy (being able to read or count numbers is not required).

Additional entry level objectives must also be written to describe the verbal and motor prerequisites for starting the program. Note that in the example provided, entry level skills are defined as closely as possible to the demands of the actual task. For example, rather than have the learner demonstrate his number skills through the matching of numbered cards, the entry level objective requires the learner to put his finger in the hole on the telephone dial corresponding to a printed number.

Task Analysis: Using A Dial Telephone

1. Lift receiver with non-dominant hand;
2. hold receiver to ear on non-dominant side with speaker to mouth;
3. listen to receiver for three seconds,
 - a. if party line is busy, hang up gently, wait 5 - 10 minutes and repeat steps one to three;
 - b. if dial tone is heard, proceed with step number 4;
4. locate the first number in the seven digit telephone number provided;
5. locate the same digit on the telephone dial;
6. insert index finger of the dominant hand into the hole closest to the number;
7. using index finger rotate the dial in a clockwise direction to the finger stopper;
8. remove finger and let dial return to original position;
9. select second digit in seven digit number, repeat steps 5 - 8;
10. repeat the sequence of steps for the remaining five numbers in order;

11. listen;
 - a. if busy signal is heard, hang up, wait 5 - 10 minutes and repeat steps 1 - 11;
 - b. if phone rings five times without answer, hang up, wait one-half to one full hour and repeat steps 1 - 11;
 - c. when person at number called says, "hello", ask for name given;
 - d. if wrong number reached, say, "I'm sorry, I have the wrong number", and repeat steps 1 - 11.

This instructional sequence describes the skills that must be taught and the order in which the task must be performed. This task has a fixed order of performance (it is an example of a response chain); many tasks are not fixed in this manner and the steps may be completed in various orders.

The sequence of telephone dialing skills presented above represents one way to analyze the task; with most tasks there are usually a number of different ways to analyze the problem. Which task analysis is the best can only be determined by research designed to answer the following questions; given a particular population of learners, with which sequence do they learn most rapidly, with which sequence do they perform the least number of errors, with which sequence do their skills generalize most readily, and which sequence produces the most durable skills? Having a well defined instructional sequence indicating which skills were taught and the order in which they were taught provides a starting point for answering these research questions and also provides a structure that can be improved with the evidence derived from a number of teachers working with various learners. Thus, teaching becomes research-based rather than being guided merely by theory or intuition. Of course, preparing and task analyzing an instructional objective and sequencing the skills into an instructional sequence are only the early steps in developing an instructional program; one must also select effective strategies and materials for teaching each skill.

There are several steps involved in performing an effective task analysis. The first step is to make a thorough review of the literature and available instructional programs, strategies and materials. There is no need to "reinvent the wheel" and there is usually considerable advantage in reviewing instructional materials and methods used in the past.

The second step in the analysis involves a study of performance in the following manner:

1. thoroughly "think through" the task and, in detail, write down each step;
2. perform the task, and
3. observe the task being done by both adequate and inadequate performers from the population for which the program is being developed; this analysis will likely reveal a number of successful techniques to teach, and a number of errors to avoid.

In each of these procedures observe and record what the performer does, how he does it, what he does with it, what he does to it and why he does it. Generate a variety of different ways to perform each task; study the implications of each alternative procedure, for example, the number of steps needed, and the difficulty of the skills required. During each step of each analysis ask the question, "What skills or knowledge are required to perform this task?"

The third step in the analysis involves an assessment of the learners in the target population. Determine which prerequisite skills are already possessed by the lowest performers in the group. These are the "entry level skills" that the least capable learner can perform upon request and without assistance. The task analysis proceeds from the instructional objective down to the entry level skills. Also, assess the rate and style of learning of the lowest performer in the group. This information will determine how small each step in the program should be and how each skill should be taught.

A fourth and very important step in the analysis of complex tasks involves a hierarchic analysis. This analysis provides further assistance in determining enabling skills and also assists, for instructional purposes, in rank ordering these skills from simple to difficult. The following hierarchic analysis is based on a system proposed by Gagne (1977). The approach involves the analysis of a task into (a) stimulus-response links, (b) chains, (c) discriminations, (d) concepts, (e) rules, and (f) problem solving.

Definitions and examples of each of these terms are provided at the end of this chapter. Each level of the hierarchy is dependent upon each of the lower levels. For example, to learn a concept, one must first learn stimulus-response links, chains, discriminations and then, concepts.

The procedures described above will provide the analyst with a list of knowledge and skills considered to be prerequisite to completion of the task, various ways to perform the task and, inadvertently, a number of steps in the sequence that are redundant or only tangentially related to the task. While eliminating the latter skills from the sequence, select the simplest method to perform the task (the method requiring the least number of steps, as well as the fewest and easiest skills to be learned).

The following checklist summarizes the major procedures involved in performing a task analysis.

Checklist for Task Analysis

- | | Complete | N/A |
|---|----------|-----|
| 1. Review the developmental literature as well as instructional programs, strategies and materials. _____ | | |
| 2. "Think through" the task. _____ | | |
| 3. Perform the task. _____ | | |
| 4. Observe adequate/inadequate performers in the target population. _____ | | |

In steps numbered 2, 3 and 4, observe and record:

- a. What the learner does;
- b. How he does it;
- c. What he does to it; and
- d. Why he does it. _____

Complete

N/A

5. Analyze if there are alternative methods of performing the task (determine what number of skills are required and what difficulties are inherent in each method of performance). _____
6. Assess the lowest learner in the target population;
 - a. determine what prerequisite skills he possesses; _____
 - b. analyze his rate and style of learning. _____
7. Eliminate unnecessary or redundant tasks from the sequence. _____
8. Select the simplest manner of performing the task (the method with the least number of steps and the fewest and easiest skills). _____
9. Perform the hierarchic analysis:
 - a. stimulus-response links _____
 - b. chains _____
 - c. discriminations _____
 - d. concepts _____
 - e. rules _____
 - f. problem solving _____

D. SEQUENCING SKILLS

Following a task analysis, the enabling knowledge and skills required to complete the task are organized into an instructional sequence. There are several methods for sequencing tasks.

Tasks may be sequenced hierarchically so that prerequisite skills are taught first. Gagne's (1977) taxonomy provides a useful guide for hierarchic sequencing. Stimulus-response links are sequenced first, followed in order by chains, discriminations, concepts, rules and problem solving.

Where tasks within a response chain must be performed in a fixed order, it is most desirable to give the learner as much practice as possible performing the task rapidly and accurately in that order. However, some tasks within the chain may be relatively difficult and may act as "stumbling blocks" to smooth performance. In this case, it may be desirable to teach the more difficult tasks first; then, when these skills are well established, reintroduce them into the chain and repeatedly practise the chain as a unit.

E. TEACHING AND TESTING

When the enabling skills have been ordered into an instructional sequence, it is time to select and integrate suitable teaching strategies and materials into the sequence. This procedure will be demonstrated with the example of teaching a student to button a sweater.

a. Select general teaching strategies:

The teacher uses the following prompting procedures to teach each of the enabling subtasks.

- Step 1. He physically models and verbally describes what to do.
2. He physically assists and verbally describes what to do.
3. He fades the physical assistance and merely touches or gestures while describing what to do.
4. He fades the verbal description of what to do and merely tells the student to "button your sweater".

Pretest each step of the program and only introduce as much prompting as is necessary to permit the student to perform the task; for example, if physical prompts are not required, do not use them. Fade the prompts from use as quickly as possible. For example, when a student can successfully perform a test three consecutive times at one level of prompting, move to the next level of successively less prompting.

b. Selection of general correction strategies:

1. If the student is obviously about to perform a task incorrectly, because of inattention, lack of care or understanding, say, "No!". Prevent the incorrect response from being completed; say, "Look", model (and if required, physically prompt) the correct response, and request the response again.
2. If a student performs an error at one level of prompting, say, "No!", and increase prompting to the next highest level. After three consecutive correct responses, return to the previous level of responding.
3. If the student has difficulty in proceeding from the level of prompting to the next, fade the assistance more slowly, or if required, analyze the task into smaller steps.

c. Selection of general reinforcement procedures:

1. Use descriptive praise to reinforce each correct response: "Good pinching the button", "Good pushing the button through the hole".
2. Use primary reinforcement such as edibles only if required, and if possible, only intermittently.
3. Initially reinforce each task properly performed; later, randomly reinforce every 2, 3 or 5th response.
4. Be enthusiastic when reinforcing a response; except when following a correction, descriptively reinforce in a monotone and do not use primary reinforcement.

d. Selection of vocabulary and phrasing to be used consistently throughout the program and consistently among the several persons working with the student:

1. "Pinch the button."
2. "Hold the sweater."
3. "Put your thumb on the buttonhole."
4. "Push the button through the buttonhole."
5. "Try again."

These techniques are integrated into the following exerpt from a buttoning program. The teacher's instructions to the learner are printed in CAPITALS. Note that each step of the program is written in the form of a behavioral objective with conditions, learner's performance, and standards.

CONDITIONS	LEARNER	STANDARDS
1. (Stand behind the learner facing his back)	- stand with arms by side wearing open cardigan	
2. (Move right hand 2 feet in front of learner's face). *LOOK. (Pause). (Move hand to lowest button). LOOK. (Pause). I PINCH THE BUTTON. (Pinch button between thumb and forefinger as in diagram). (<u>Hold</u> hand in this position).	- attends to hand - follows hand - attends to button	Continuous attention to relevant hand. (If attention inadequate, introduce an Attention Training Program before proceeding).
(Move left hand 2 feet in front of learner's face). LOOK. (Pause). (Move hand and point to next highest button). LOOK AT THIS BUTTON. (Pause). YOU PINCH THIS BUTTON. (Give 3 trials without assistance). Say TRY AGAIN, before each trial.	- attends to left hand - follows hand - attends to button - pinches button with right hand	If 3 consecutive correct responses, proceed to next task.
<u>Reinforce:</u> (1:1 ratio)	- <u>if correct</u>	
Correct: introduce and fade prompts as required. Repeat, YOU PINCH THIS BUTTON. (Give 3 trials without assistance). Say TRY AGAIN before each trial.	- <u>if error</u> - pinches button with right hand	If 3 consecutive correct responses, proceed to next task.

*This program sequence describes the procedure used to button a cardigan worn by a male. For females where buttons are sewn on the left side of garments, in each case, use the opposite hand to that described in the program.

These procedures for designing instruction can be used to develop a variety of instructional programs, such as self-help, academic, social, and vocational skills for various types of exceptional students. A major advantage of this approach is that it incorporates individualized instruction and criterion-referenced testing. For example, each learner receives as much assistance as is required and progresses as rapidly as he is able. Each step of the program is pre-tested and post-tested. If a student passes the pretest, he skips that step of the program. In both the pre-test and the post-test, one merely presents the conditions described at that step, removes any assistance or reinforcement, asks the student to perform the described task, and evaluates the performance in terms of the specified standards. Thus, testing is an integral part of teaching.

F. DEFINITIONS AND EXAMPLES OF THE HIERARCHIC CATEGORIES

Note: Although this taxonomy is based on Gagne's (1977) classification system, a number of basic modifications have been made to the scheme.

Stimulus - Response Link. A stimulus-response link is comprised of the linking together of a single stimulus and response. The occurrence of simple stimuli and responses such as, S = "light-on" and R = lever press, are rare. Compound stimuli and responses are more common, for example, S = teacher presents a single spoon and says, "Point to spoon", and R = learner points to spoon.

Chain - A chain is comprised of a number of verbal and/or motor stimulus-response links (a series of alternating discriminative stimuli and responses) performed in a fixed order. For example, the chain: 1. picking up a spoon, 2. scooping food, and 3. putting the food in one's mouth, involves three stimulus-response links. The presence of the spoon is a stimulus for: 1. picking up the spoon; the spoon in the hand is a stimulus for: 2. scooping food, and the food on the spoon is a stimulus for: 3. putting the food in one's mouth.

Discrimination - Discriminations involve the distinguishing of one or more familiar, identical objects from a number of other objects. For example, distinguishing (pointing to) one or more familiar, identical spoons from among several objects that may be similar to the spoons. Discriminations involve chains, such as: 1. looking at the physical properties of all objects presented, 2. distinguishing objects having all of the characteristics of spoons (all other characteristics are also identical), 3. distinguishing objects having none, or some but not all of the characteristics of spoons, and 4. pointing to (one consistent response) the familiar objects having all the characteristics of spoons (all other characteristics are also identical).

Concepts - Concept learning involves the classification (by pointing, or naming) of one or more familiar and unfamiliar objects that are within the same class. The objects within the class are similar (have the same essential characteristics), but they are not identical (have different non-essential characteristics). Classification involves discrimination of objects within the class, from objects outside the class. For example, concept learning involves the classification (selectively pointing to) a variety of different chairs, some previously encountered (involves generalization), among several objects similar to chairs (involves discrimination).

Rules - Rules are statement about the relationship between two or more concepts; a learner is considered to have acquired a rule when he has demonstrated its application. For example, the rule, "a spoon, may be used to move small objects", describes the relationship between 5 concepts.

Problem Solving - Problem solving is demonstrated when an individual puts two or more rules together in an appropriate sequence to solve a previously unencountered problem. For example, problem solving is demonstrated when the spoon rule (above) is joined with the screwdriver rule (a screwdriver tightens a screw by turning the slot in a clockwise direction) by tightening a screw with a spoon.

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BEHAVIORAL OBSERVATIONS

A. INTRODUCTION

Teachers of students with handicaps may incorporate behavior modifications as a teaching method for use with particular students. To do so will require not only a basic understanding of human behavior but also technical skills in assessing and recording behavior and then interpreting the data.

A formalized recording procedure is needed to add objectivity and reliability to behavioral observations. Too often our memory is not accurate enough to evaluate whether a student has improved in a program or not, over a long period of time. An objective data recording system will help pinpoint degrees of progress which we may overlook. It also provides a permanent record of the training progression which is useful at yearly reviews or in replications of successful training methods.

B. IMPLEMENTATION

Any behavior modification program has at least 3 basic components: 1. baseline period, 2. treatment phase, and 3. a follow-up or post-treatment phase.

During the baseline phase, the teacher or therapist assesses the behavior to determine the operant level or pretreatment level of skills or behavior. This gives a starting point to the program and a standard of measure for progress.

Before behavior can be measured accurately, a teacher should define it precisely so that there will be no doubt or confusion in her mind or with others as to what exactly is being measured.

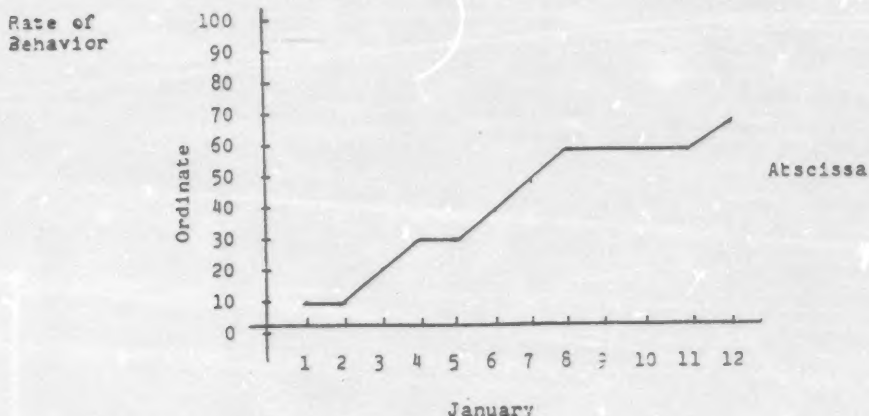
Example: John is a 12 year old autistic boy. He frequently rocks on the floor during classtime when he should be working. The teacher has defined the behavior in this manner: "John is rocking when he sits on the floor with his back to the wall, crosses his legs Indian style, folds his arms over his chest, stares vacantly into space and moves back and forth bending his body at the waist in an approximate 90° angle repeatedly".

From this description the teacher should be able to record accurately when and how often the behavior occurs.

Before the implementation of any behavior modification program, it is important to obtain a baseline. A baseline is a record of the operant level or present functioning level before intervention programming begins. A pre-baseline is taken before the program and a post-baseline is taken during or after the program is completed to monitor what effects there are on the behavior. The graph indicates what a student can and cannot do. Most baselines last at least five sessions. The best way to represent a baseline is by using a graph.

A graph on standard graph paper is the easiest to use and understand. A horizontal line (or axis) called the abscissa indicates the time or number of sessions. A vertical line (or axis) called the ordinate represents the level or

rate of behavior. Note that the ordinate is usually only two-thirds as long as the abscissa and that both are divided into segments of equal length. Note that only one zero is indicated at the junction.



For each day or session a dot is "plotted" at the intersection of lines from the date and the rate of behavior. The dots are then joined by a solid line.

By graphing the data, the teacher gets a quick visual representation of the baseline level of the behavior. Graphs that go up are called ascending baselines and indicate that the behavior is increasing. Graphs that stay level are called stable baselines indicating stable progress. Graphs that go down are called descending baselines and show a decrease in behavior.

C. METHODS OF MEASURING BEHAVIOR

Although there are many different variations, the seven most common ways of recording behavior are described here.

1. Frequency Count (also called "rate" or "event recording").

A frequency count is one of the most practical and useful procedures, and perhaps the simplest and most commonly used. The teacher simply counts the number of occurrences of a certain behavior within a given period of time. A tally mark is indicated when the behavior occurs.

Behavior	Frequency
Asking questions in class	11

A variation could be substituting the tally mark with a coded letter.

Behavior: T T W T W F T	Code T = Talking W = Wandering F = Fighting
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Still another variation could involve using a coded letter plus a time entry.

T - 9:05 T - 9:30 W - 9:35 F - 9:40	Code T = Talking W = Wandering F = Fighting
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A wristwatch type counter used by golfers is a handy tool or an abacus can be utilized with different rows of beads counting different types of behaviors.

2. Duration (also called Timing, Latency)

It is often insufficient to record the frequency of behavioral occurrences. We often need to know duration or how long the behavior lasted. To do this, a stopwatch, wristwatch or clock is used. In addition, the reaction time between the initial presentation of a stimulus (or instruction) and the onset of the response (or work) is measured.

3. Qualitative

Certain behaviors do not lend themselves to as precise a measurement as others. These behaviors can be represented in educational programs, vocational training, self-help and socialization programs. In these cases, the student is graded on how he performs a task. Different grading methods can be used.

Example: Putting on a T-shirt.

1 - Holds shirt with label on the back.	0 0 1 1 2
2 - Puts shirt on head.	0 0 0 1 1
3 - Pulls shirt over head.	2 2 2 2 2
4 - Puts right arm in.	3 3 2 3 2
5 - Puts left arm in.	0 0 1 2 3
6 - Pulls shirt down to waist.	2 3 4 4 4

Score Key:

- 0 - no response, with maximum assistance
- 1 - some response, with maximum assistance
- 2 - response, following 1 or 2 physical assists
- 3 - response, 1 or 2 verbal assists (or gestural)
- 4 - response, following verbal request only

Score Key:

- PP = physical prompt
- GP = gestural prompt
- VP = verbal prompt only
- I = independent

4. Diagnostic

In attempting to determine why an undesirable behavior occurs, two probable causes or sources must be examined.

- a. What was the stimulus or condition that immediately preceded the behavior that may have triggered or caused it?
- b. What was the resulting condition that may have reinforced it and may increase its future probability of reoccurrence?

Careful observation of these 2 factors may often reveal the cause and subsequently the solution.

Example:

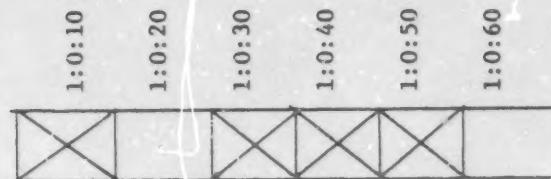
Behavior	Antecedent	Consequence
Crying	Student was told to work	Student received candy

Note: Not all behaviors have both an antecedent and a consequence that reinforces behavior.

5. Time Interval

Some behaviors are so repetitive (e.g. rocking) that to try to record them accurately is too time-consuming and cumbersome. The same situation develops when you want to record a behavior over several hours. One way of alleviating this difficulty in recording is to divide a specific time period into small intervals. A half hour may thus be divided into 10 second segments. Whenever the behavior occurs in that 10 second segment, it is recorded but only once during that time. It does not matter how often it occurs or the duration of each discrete behavior during the ten-second interval.

Example:



Score Key: Place an X in the interval when the behavior occurs. A tape recorder with a 10 second beep can be used to help keep track of the time. For larger segments of time a kitchen timer or similar device may be useful.

6. Time Sampling

This is similar to Time Interval except that a record is made at the end of each interval. The advantage is that the teacher needs only to observe when the recorder or timer signals the end of an interval.

With both Time Interval and Time Sample, a teacher may record continuously all day or simply "time sample" or pick different, varied periods during the day to observe. This random sampling should give the teacher a good indication of the actual occurrences of behavior.

7. Continuous Recording

Continuous recording involves selecting a specified time interval (an hour) and recording every instance of the behavior's occurrence in detail. This, though time consuming, is complete.

8. Anecdotal Recording

Anecdotal recording is simply making notes about the behaviors. A teacher, therefore, may make daily summary notes of behaviors to set a continuous profile of a student.

Once the baseline is completed, the treatment phase begins. During this period, continuous observation and recording of the behavior is maintained. It is now that your strategies or methods of teaching are carried out. Therefore, you should decide beforehand how long this phase will continue.

Selecting the Proper Assessment Tool

Type of Assessment	Things to Consider	Examples of Behaviors
Frequency	1. Behaviors are discrete 2. Duration of each behavior relatively equal 3. Need to get a record of total number of occurrences	- toilet accidents - pinching - throwing objects - going to the bathroom - asking questions

Duration	1. Behaviors tend to be long in duration 2. Duration is variable 3. Percentage of appropriate response is important	- rocking (self-stimulation) - crying - talking - walking - tantrums - sitting
Qualitative	1. Frequency and duration not an accurate measure 2. Need to agree on grading system 3. Behavior performance tends to be more subjective	- dressing and undressing - washing dishes - sweeping floor - speech reproduction - eating habits and behaviors
Diagnostic	1. Need to find cause of undesirable behaviors 2. Record where, how, why, what, when a behavior occurs	- fighting - head banging - tantrums
Time Interval Time Sample	1. Behaviors are frequent and repetitive 2. Need to record over long periods of time 3. Can record several behaviors at once 4. Need to know when behavior occurs during day	- self-stimulating behaviors - working or not working - play behavior - reacting
Continuous	1. Need detailed information 2. Need profile of progress 3. Need to write down everything that happens	- aggression - work behavior - attitude
Anecdotal	1. Need daily, weekly, monthly summation of behaviors 2. Need overall picture of student over a long period time 3. More subjective evaluation	- emotional growth - progress in programs - significant events or occurrences - highlights

RECORD KEEPING

AND

REPORTING

A. REPORTING STUDENT PROGRESS IN SPECIAL EDUCATION SETTINGS

1. Introduction

Reporting to parents on student progress is an essential component of effective school/home communication, particularly in the area of special education. Parents must be informed about all aspects of a child's education so that parents and the school can work cooperatively in providing the best possible opportunities for progress and development. Information conveyed to parents should include results of diagnostic testing, subsequent program planning, information relevant to program placement decisions, student progress made toward instructional goals, and year-end promotion decisions. The focus of comments should be on steps that parents can take to assist in the child's progress.

Evaluation and subsequent reporting of student progress should be based on sound and defensible educational practices and procedures. Such an appraisal should reflect progress toward a specified set of educational objectives, take into account the student's readiness to handle subsequent units of study, include all pertinent aspects of development, be both on-going and cumulative, and be fair and just.

2. Record Keeping

In order to facilitate efficient reporting of student progress throughout the year, it is essential that adequate records be kept by the teacher. A good record keeping system should:

- facilitate ease of recording;
- be readily understandable and usable by the reader;
- be both accurate and complete but as brief as possible;
- include both scores and comments recorded objectively so that fact and opinion may be distinguished from each other;
- provide for a comprehensive picture of the student in relationship to his own capacity and growth, peer group and school environment;
- provide for systematic procedures to be used within a class, school, or system.

This record keeping system implies continuous, accurate, up-to-date recording of all major measurements undertaken throughout the school year.

3. Methods of Reporting Student Progress to Parents

a. Informal Methods

There will be occasions between formal parent/teacher conferences when there is need for some informal communication between teachers and parents. Telephone calls, notes sent home with students, and informal discussions are some of the ways in which information may be transmitted. This form of communication may be either teacher or parent initiated. Some areas which may be dis-

cussed via informal communications with parents are requests for information needed to help explain a student's unusual social behaviors, parental requests for specific information, and student tardiness, illness, and absence from school.

b. The Individual Parent/Teacher Conference

The individually scheduled parent/teacher conference is probably one of the most useful structured ways of communicating with parents. The interview can place reporting on a friendly and confidential basis. It can be more thorough, more individualized, and more specifically diagnostic than the report card. As a two-way communication, the parent/teacher conference has the potential not only to inform teachers of the student's home background and previous history, but also to provide an opportunity for the teacher to interpret the student's program and to enlist the cooperation of the parent in implementing the program effectively.

c. The Progress Report

All students should receive formal reports periodically. A report card represents a formal means of providing relevant and meaningful information to parents and students. The report card provides a permanent record of basic student progress throughout the year and can be supplemented by the parent/teacher conference and other communications, as required. Communication to parents and students which occurs through on-going reporting during the year must be consistent with, and lead up to, the final report, which specifies placement for the following year. Several reporting forms are available for use with special education students. The report may be narrative in form or follow regular report card format. The final decision as to what will be used remains with the local school jurisdiction.

B. CUMULATIVE RECORD CARDS

A cumulative record card should be maintained for each student from the time of registration. Generally, the information contained in a student's cumulative record card is all "hard", (i.e. factual) as opposed to "soft", (i.e. opinions or observations). Listed below are the types of data that should be recorded in the Cumulative Record Card.

1. Basic identification and demographic data;
2. Attendance data;
3. Report card data and promotion or special class placement;
4. Standardized test results;
5. Medical information relevant to the student's functioning in school.

All irrelevant material should be removed from the cumulative file annually.

C. CONFIDENTIAL REPORTS

1. Confidential reports are the working files of the professional staff working within the Student Services Department of a school jurisdiction. They include reports prepared by psychologists, psychiatrists, speech pathologists,

audiologists, mental health workers, remedial reading specialists, attendance officers, counsellors, and special education teachers. They might also include reports from other outside agencies.

2. Confidential reports convey information from one professional to another and, unless Board policy states otherwise, are not normally made accessible to students, parents or guardians unless permission is given by the author of the report. Such reports may be interpreted to them by the author.
3. Confidential reports are entrusted to the school to assist the staff in developing and providing suitable programs for students. The reports should be used in confidence by those professionals who work with the children concerned.

D. RELEASE OF INFORMATION FOR RESEARCH PURPOSES

1. Information in both the cumulative record cards and confidential reports may be used in research projects which have been approved by the Superintendent of Schools or his designate.
2. Confidentiality should be protected by removing the student's name and student number from the material before it is released.

E. RECORD - STORAGE AND TRANSFER

1. Record Storage

Cumulative record cards should be kept in a place accessible to legitimate users as defined by Board policy, e.g. principals, teachers, parents and students who have reached the age of maturity. Confidential reports are normally stored in the principal's confidential files.

2. Transfer of Cumulative Record Cards and Confidential Reports

When a student moves to a school within the same school system, the cumulative record card and relevant confidential report(s) should be forwarded to the receiving school, in accordance with Board policy. For students transferring to other school systems, cumulative records should be forwarded upon request, provided that parental consent has been obtained. For students transferring into the school system, it is helpful to obtain at the time of registration a parental release to enable the school to obtain confidential information.

ESTABLISHING A
WORK STUDY PROGRAM
FOR STUDENTS WHO ARE
HANDICAPPED

WORK STUDY PROGRAM CHECKLIST

A. School Jurisdiction

- _____ 1. Establish need for program.
- _____ 2. Develop written philosophy.
- _____ 3. Develop program plan with description.
- _____ 4. Obtain approval for program from Board.
- _____ 5. Appoint work study coordinator.
- _____ 6. Identify and select students.
- _____ 7. Develop and approve timetable to provide work study coordinator sufficient time to supervise work placements.
- _____ 8. Check with high school work experience coordinator to avoid duplication.
- _____ 9. Obtain appropriate work sites.
- _____ 10. Obtain parental consent.

B. Legal

- _____ 1. Obtain approval from designated Alberta Education personnel.
- _____ 2. Ensure that each student has social insurance number.
- _____ 3. Register all work sites with Alberta Education.
- _____ 4. Study latest edition of Work Experience Education, Alberta Education.
- _____ 5. Check to make sure that all guidelines are followed.
- _____ 6. Obtain written agreement - student, employer, parent and Board representation.

C. Employer

- _____ 1. Provide employers with orientation to program and students
- _____ 2. Discuss all regulations with employer.
- _____ 3. Set up evaluation process with employer.

D. Evaluation

- _____ 1. Establish regular work site visitation schedule.
- _____ 2. Develop checklist for employer.
- _____ 3. Develop checklist for student.
- _____ 4. Develop checklist for work-study coordinator.
- _____ 5. Provide time sheets to student and employer.
- _____ 6. Send written evaluation report to the Board and Alberta Education.

A. INTRODUCTION

There are within our society a number of students who, for various reasons, are unable to achieve success in the regular academic-oriented school program. Frequently, the needs of these young people may be met in a work study program. Educators interested in establishing a successful work study program for handicapped students must first agree that the need is significant.

The following advantages may accrue to students involved in a work study program:

1. Students are placed in a setting different from the traditional classroom-based environment.
2. The program emphasis on occupational preparation carries through the school setting to work study placements.
3. The practical orientation of the program provides opportunities for students to experience success in a variety of situations.
4. Frequently, success in a work study program leads to the development of more positive attitudes toward the acquisition of knowledge, skills and habits relevant to a chosen occupation.
5. Experiencing success leads to the enhancement of a positive self image.

Much of the discussion in this section is related to the development of a center in rural Alberta. However, the approach used, techniques employed and information included here can be adapted to the varied situations, needs and capabilities of each school district.

B. ESTABLISHING A PROGRAM

The following points must be considered in establishing and maintaining a successful work study program. Those involved should:

1. Generate interest and identify needs. The school and community should be surveyed to determine interest and needs. Possible sources available to assist in the needs identification include social services, school system offices, schools, parents, businesses and service organizations. Sources can be approached for varying levels of support.

Once the need is established as valid, interest will be generated in initiating a program that will assist the handicapped in adjusting to society and work.

2. Establishing a philosophical base. The development of a philosophy is key to the establishment of a work study program. Arriving at a philosophy that works is a matter of collective concern to the people involved; it should fall naturally into the needs identification. The philosophy must relate to the concept of the overall growth of the student. It will

establish the purpose of the program and its emphasis; it provides a thread that weaves all aspects together. Goals and objectives of the program should be included.

3. Develop a program. A successful program will be consistent with the philosophy and will also satisfy education requirements. Such a program has as its aim the successful placement of the student into the work force. Achievement of this aim is based upon a combination of assessment and development of attitudes and skills through shop training and practical work experience.
- a. Separate delivery systems should be utilized and integrated to provide services for students who are handicapped in the following ways:
 - (1) a special in-class situation through which academic and life skills can be related to occupations in practical settings;
 - (2) a laboratory practicum which affords students an opportunity to test interests and skills in a controlled atmosphere;
 - (3) a work station experience appropriate to student vocational interests and abilities which provides a realistic understanding of actual working conditions. This assists the student to make a decision about how to continue job training in the future.
- b. The following guidelines should be considered in developing the program:
 - (1) Students should be immediately employable following the course. In other words, these courses are not necessarily articulated with high school or post high school institutions.
 - (2) Students should be in occupations where there is an opportunity for reasonably long term employment.
 - (3) Students should not be educated into a dead-end type of job with no opportunity for occupational growth.
 - (4) Students should have what one might call horizontal movement, that is, they can move into related jobs from the experience they have had.
 - (5) The length of training must be realistic on the part of the student, the facilities and the costs involved.
 - (6) It is essential that there be cooperation among different agencies to avoid duplication of effort.
 - (7) Only occupations that can be taught realistically in the school/shop setting should be offered.
 - (8) Courses should be appropriate to the ability and maturity of the student.

- (9) Standards should be set to ensure that the program does not expand beyond its capacity to succeed. The breadth of the program to be offered must be considered carefully.
- (10) The cost of the program should be within the resources of the community.

The needs of handicapped students should be identified and placed in perspective within the students' overall occupation or work future. The work study program is at least equal in importance to other parts of the program.

4. Obtain program approval. All work study programs must be approved by the school board and Alberta Education. Work Experience Education, 1980, defines and explains the acts and regulations pertaining to work experience, including work study. Within it are guidelines to be followed for all work experience programs including those for the handicapped. These guidelines are reprinted here.

Note: See "Department of Education Guidelines" and "Alberta Labor - Employment Standards Branch Guidelines" on pages 79 and 80.

5. Identify and select students. The identification and selection of students who will participate in a special work study program must be done carefully. Students should be selected on the basis of criteria set by the jurisdiction. Basic to selection is the understanding that the student is not capable of completing an education successfully in a normal school setting and environment. The work study program must be one in which there is a strong probability of success for the student.
6. Obtain a facility. The degree to which a facility adequate for work skills and occupational training can be developed will, in part, determine the level of success. The importance of having a space adequate in size and appropriate for skill assessment cannot be over-emphasized. Possible sites for consideration could include: areas established in a regular school, unused school facility, a quonset, county yard facilities, a garage, etc..
7. Place student in work setting. Work placement arises out of work skills which are learned initially in a school setting; in turn those skills will be increased through continued application in a work study setting. A plan for a work study program should include goals and objectives, a list of teaching and learning techniques, materials to be used, staff required and suggestions for evaluation (see sample at the end of this section).

The following general procedures may be employed in placing and advancing a student through a work study program.

- a. Admit the student into the program.
- b. Have the student spend a period of time at the school taking part in classroom activities such as academic upgrading, life-skills instruction and work-skill training including occupational training, e.g. workshop projects, renovations of the school. During this time, the instructors assess how the individual operates in a work setting and give some guidance for improving work habits and skills.

- c. When it appears that a student is ready to begin work in the community, the student indicates some choices of occupation in which he is interested.
 - d. Vocational counselling becomes important at this point in suggesting possible job placements available to the work experience program.
 - e. The work study coordinator along with the school instructors and students make a tentative "match" of employer and student according to observation and information gathered from both parties.
 - f. The student then proceeds through a job-seeking interview where a decision is reached by student and employer as to the placement suitability.
 - g. If the placement appears suitable, the hours of work will be allocated by the school instructor, work study coordinator and employer. Duties and supervision will be identified by the employer. At this point, a starting date is set up and the student begins "work". Work and time vary according to student needs and job readiness as well as other activities going on at the school. Placements may be set up for a six-week period or some other appropriate length of time.
 - h. Close contact between the employer and school personnel is important to the success of the placement. The work study coordinator or school instructor should make regular visits to the job site, evaluating progress together with the employer, and relate successes or problems back to the school with suggestions for improvement. Placements may be discontinued at any time if they prove unsatisfactory to the employer, to the student or to the school personnel.
8. Consider these points. Before becoming involved in developing a work study program for students with special needs, it must be noted that attitudes toward both the student and the approach used are extremely important. The teacher/work study coordinator should:
- a. Become knowledgeable about community resources and be willing to use whatever is available. Problems encountered will vary greatly according to facility and available staff. Identifying the resources a community can offer is an integral part of the work study program.
 - b. Remain versatile. A program should be planned so that special events such as workshops, first aid, or driver education can interrupt work placement without causing major problems. Many related work skills need to be assimilated; these need to be taught wherever and whenever appropriate.
 - c. Be adaptable. There is not enough time, staff or energy to spend on materials or ideas that will not accomplish what is needed. Teachers must provide sufficient time for a trial but refrain from trying too long because of a vested interest or commitment.

- d. Recognize capabilities or limitations. Teachers must be willing to set aside a good idea that cannot be used at a particular time. These ideas should be used when the appropriate time and circumstances indicate. Selecting what can be done successfully from among the various possibilities makes the work study program realistic.
 - e. Establish ground rules for behavior. Rules are important, yet should be flexible so they can be instituted or modified as the situation warrants.
9. Determine program length. The time required to place a student successfully into society cannot be determined precisely. Individual student levels of ability and rate of achievement vary greatly. The length of time the student spends in a work study program will be determined individually. Rate of advancement should be determined through assessment of the student by the staff involved.
10. Evaluate/assess student and program. Evaluation of the individual student will vary according to need. Forms developed for this purpose will vary accordingly, but may include the following (see Appendix B for samples):
- a. Daily plan worksheet. This can be used in shop work or for job projects. It is useful in both planning and keeping track of student development and problems encountered.
 - b. Work-skills project form. This works well in determining student capabilities in organizing and carrying out steps.
 - c. Student work assessment form. Each area is assessed by the staff involved; categories deal with work skills and may overlap other areas as well.
 - d. Work-study application. This may be used to assess the student once desire for entrance to work study is expressed through formal application. This is accomplished by the student turning in the student work assessment form.

Various work study evaluation forms for the employer, the coordinator and the student can be found and adapted to fit varying assessment needs.

Both assessment approaches and actual applications of assessment results need to be developed to fit the program used and the student needs that arise from that program. All measurement devices and techniques should be evaluated constantly in an effort to maintain clarity and accurate assessment. The approach should be positive.

11. Be prepared for problems. Numerous problems may arise in establishing a program for handicapped students. The solutions suggested here must be adapted to meet specific situations:
- a. Economic or budget dilemmas. Finding ways to fund a facility and program is an issue of primary importance. Solution: Use parent organizations and school system to seek out and apply for available funds. Seek donations of money or materials from all sectors.

- b. Inadequate number of human resources. Solution: Use media outlets for public relations; hold organization meetings with groups and individuals concerned. Provide information to the community, parents, students, employers, school boards and staff. Seek volunteer aid.
- c. Failure to know and gain approval for regulations in force. Solution: The guidelines listed in Work Experience Education, Alberta Education must be followed. Some modifications may be made with permission.
- d. Inadequate or inappropriate facility, materials and equipment. Solution: Solicit donations from all areas. Accept specific job tasks on location for skill training.
- e. Lack of available work experience sites. Solution: Establish more intensive contact with possible placement sites. Utilize the media.
- f. Inadequate staffing. Solution: Use volunteer aides to keep the student staff ratio in a workable proportion.
- g. Transportation crisis. Getting students to and from work placements in rural areas presents obvious difficulties. Solution: Seek volunteer transportation from service organizations or, a school district allotted vehicle. Provide mileage allotment for private transportation.
- h. Lack of overall skills development. Solution: Ensure that the work study program is developed on the premise that the student will emerge from it capable of leading an independent and satisfying life.
- i. Inappropriate attitudes, including the following:
 - students who want to enter an occupation they cannot achieve
 - parents who insist upon unobtainable goals or who are lethargic concerning involvement in the program
 - administrators who are reluctant to create special status and privileges or to waive traditional formats and rules
 - educators who are not properly prepared to deal with issues related to the student and program
 - labor unions that express concern about placement of work study students
 - a public at large that may express unwarranted concern over the emphasis given to the special studentSolution: Inappropriate attitudes can be changed and inaccurate information eliminated. Provide appropriate information, resources and inservice.
- j. Student withdrawals. Some students may become frustrated and want to leave the program without giving it a fair trial. Other students with an unrealistic view of their capabilities may wish to leave the program immediately after an initial successful experience. Solution: The attitude must be maintained that the student enters the program on a voluntary basis and may leave when preparation for occupation and society has been accomplished. The program ends when the student leaves.

DEPARTMENT OF EDUCATION GUIDELINES

- a. The school board must first approve the program.
- b. Application for approval of each school's program must be made annually.
- c. The application must be approved by a designated representative of Alberta Education.
- d. At least one teacher-coordinator must be appointed in each school or school jurisdiction.
- e. The school must provide an in-class portion of time for job orientation and culmination as a required part of the course.
- f. The school must have a systematic evaluation program.
- g. The working hours are restricted between 8:00 a.m. and 6:00 p.m. on regular school days. The exemption from the minimum wage by the Labor Standard Branch, Alberta Labor and workers' compensation coverage under Alberta Education will apply only during these hours.
- h. The school must have parent or guardian approval in writing before a student under age of majority can participate in the program.
- i. There must be a written agreement between the student and the employer which must be signed also by the parent or guardian and an authorized representative of the school board.
- j. Students should be placed in service, industrial or commercial type jobs outside of the school. In-school work experience, although not recommended, should be limited to work in a different school than the one which the students are attending and preferably at a lower grade level.
- k. Work experience programs are normally associated with a "young person" which, under the Alberta Labor Act, means a person over 14, but under 18 years of age. The large majority of these students will be in the high school. There are, however, a group of junior high school students in academic-occupational programs who are not earning high school credits, but are old enough to work. Students must be 14 years or over in order to work. Students must be 14 years or over in order to participate in work experience or work study programs, unless they are in those occupations listed in the Labor Act as acceptable for adolescents.

One of the conditions for annual program approval by Alberta Education is that the school system will make an annual evaluation of the program which may be in the form of a written report to the school board and a copy submitted to Alberta Education.

ALBERTA LABOR - EMPLOYMENT STANDARDS BRANCH GUIDELINES

A primary concern of the Labor Relations Board in granting any exemption from the minimum wage is that regular (part-time or full-time) employees should not be replaced.

- a. To this end, the board has developed a ratio of work experience students to regular staff of the employer which must not be exceeded. The ratio is:

- (1) one student up to 5 regular employees
- (2) two students 6 to 10 regular employees
- (3) three students 11 to 15 regular employees
- (4) four students 16 to 20 regular employees
- (5) five students 21 to 25 regular employees
- (6) where the employer's work force exceeds 25 employees, the number of students should not exceed 15% of the employer's total work force.

Adherence to this ratio will ensure that employers will not rely on work experience students for labor input, but will only benefit from their services to the extent that a student works while learning. Employers should obviously be made aware that the purposes of the program are not to supply "cheap labor". The maintenance of the ratio is the only way, short of an examination of each work station, that the Board can satisfy itself that employee displacement does not occur. Teacher-coordinators accept this responsibility when placing students, and programs are approved on behalf of the Board on the understanding that teachers-coordinators will provide the necessary education of employers and supervision of the work experience.

- b. The above ratio is to be applied to each work unit within a place of business.

For example, the total number of students placed in a welding shop should be applied to the number of regular employees actually working in the shop (as opposed to clerical or sales employees of the firm).

- c. An employer may provide up to 125 hours per student for each work station per semester on the basis of the ratio in #1.
- d. The person designated as the supervisor of the student at the work station must be qualified in the trade or occupation that the student is exploring.
- e. The Board considers that hours of work should be restricted to daytime hours to coordinate the experience as a school activity. The Board's approval of a program, therefore, applies between the hours of 8:00 A.M. and 6:00 P.M. only.

SAMPLE LONG RANGE PLAN

WORK STUDY: TRAINING PROGRAM

(Opt-In, County of Newell)

I. AIM OF PROGRAM

The aim of the Work Study Training Program is to introduce the students to as many occupational skills as possible. Students will master skills related to a variety of careers. The mastery of skills will be developed over a three to four year period. Each year the student will be expected to demonstrate a higher level of ability and quality, leading to a chosen occupation or specific job skill program.

II. OBJECTIVES

- A. To enable students to recognize unsafe working conditions and prevent accidents by developing safe efficient working habits.
- B. To develop general physical and visual motor coordination through use of tools.
- C. To develop social skills by working in groups related to a job situation.
- D. To develop a positive self-image and pride in workmanship through building more difficult projects of better quality.
- E. To aid in selection of a possible career by discussing students' abilities and interests.
- F. To develop work skills through appropriate use of tools.

III. TECHNIQUES

- G. Appropriate "hands-on" experience in utilizing tools and work skills will be provided.

IV. LEARNING TECHNIQUES

- A. Manipulation of tools and materials.
- B. Observation of film, demonstrations and other students working.
- C. Practical experience through project building, field trips, work experience stations, and group activities.
- D. Listening to film, lectures, group discussions, question/answer sessions, and sounds in the shop.

- E. Reading assignments and instructions for using tools, doing projects, etc.
- F. Written assignments and note taking.
- G. Problem solving/trial and error.

V. MATERIALS AND TOOLS

- A. CONSTRUCTION - wood, metal, plastic, paper.
- B. FASTENERS - screws, glue, rivets, nails, bolts.
- C. AUDIO-VISUAL - films, tapes, filmstrips.
- D. TOOLS - hand, powerhand, stationary, power, air, gas, water.

VI. PERSONNEL

Appropriate professional or skilled persons working in areas that relate to any units in the program may be utilized. It is imperative to employ a work study coordinator with sufficient time to provide adequate supervision of the student in the work sited.

VII. EVALUATION

Both subjective and objective evaluation will be used for each student throughout the program. Daily evaluations will be in the form of specific notes indicating strengths and weaknesses. Project evaluation will include assessment of the finished product. Actual testing, whether written or oral, will be used for such things as safety, tool identification and tool usage.

Note: This long range plan is a sample only. Each system should develop its own aim, goals, objectives and procedures for such a program.

SAMPLE - STUDENT WORK ASSESSMENT

LIST THE STEPS IN THE ORDER IN
WHICH THEY ARE TO BE PERFORMED.

COMMENTS OR CHANGES MADE AS
YOU DO PROJECT.

DATE BEGUN: _____
ESTIMATED COST: _____
ESTIMATED TIME: _____

DATE FINISHED: _____
ACTUAL COST: _____
ACTUAL TIME SPENT:
DATE: _____ HOURS: _____

SAMPLE - DAILY PLAN - WORKSHEET

DATE: _____

SUBJECT: _____

A.M. _____

TOPIC: _____

P.M. _____

INSTRUCTOR: _____

OBJECTIVES:

[illegible]

SAMPLE - STUDENT WORK SKILLS PROJECT

NAME: _____

PROJECT: _____

DATE: _____

APPROVAL: _____

IN THE SPACE BELOW WRITE A DESCRIPTION OF WHAT YOU ARE GOING TO DO. IF NECESSARY
MAKE A PICTORIAL SKETCH OF THE ASSEMBLED PROJECT. GIVE OVERALL DIMENSIONS.

LIST TOOLS NEEDED

LIST MATERIALS NEEDED

THE HANDICAPPED STUDENT IN THE

REGULAR SCHOOL

The following publications are available upon request from Alberta Education (contact the nearest Regional Office).

1. The Integration of Dependent Handicapped Classes into the Regular School.
2. The Trainable Mentally Handicapped Student in the Regular Classroom.
3. The Educable Mentally Handicapped Student in the Regular Classroom.
4. The Visually Impaired Student in the Regular Classroom.
5. The Hearing Impaired Student in the Regular Classroom.
6. The Physically/Medically Handicapped Student in the Regular Classroom.

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